

Unocal Corporation
Diversified Business Group
13 Corporate Square, Suite 200
Atlanta, Georgia 30302-30329
Telephone (404) 321-7600
Facsimile (404) 320-7915



RECEIVED

JUN 23 1998

June 18, 1998

Mr. Waddell Watters
North Carolina Department of Environment
and Natural Resources, Groundwater Section
585 Waughtown St., Winston Salem, NC 27107

**RE: Ground Water Sampling &
Remediation Status Report
Former Red-Horse Truck Stop,
Incident #10119, Rank - High
Unocal Corporation Facility #9787-214
1342 Trollingwood Rd., Mebane, NC**

Dear Mr. Watters:

Unocal Corporation submits herein the ground water sampling and remediation system status report, per your April 23, 1998 request. The ground water sampling event occurred on May 12, 1998. The remaining low levels of chlorinated organics (14 µg/L of 1,2-dichloroethane in MW-3 and 2.77 µg/L of chloroform in MW-7) are not believed to be associated with the Unocal gasoline and diesel releases. No gasoline or diesel compounds were detected above the 15A NCAC 2L .0202 standards on May 12, 1998. We propose one more additional groundwater sampling event in August 1998 after the remediation system has been deactivated to check for possible rebounding. A completed Task Authorization for one additional sampling event and report is attached. Please issue a Task Authorization number, if this proposed work is acceptable to the NCDENR. If the August 1998 groundwater analyses indicate similar groundwater quality conditions, then we will request No Further Action. Please review and indicate if our recommendations are applicable at this time.

Sincerely,
Unocal Corporation

Paul Lindquist SMT

Paul Lindquist
Senior Staff Engineer

SEARCHED
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SERIALIZED
FILED
JUN 22 1998

**GROUNDWATER SAMPLING
& REMEDIATION STATUS REPORT**
Incident No. 10119, Priority Ranking -High
Former Unocal Corporation Site #9787-214
1342 Trollingwood Road, Mebane, NC
S&ME Project No. 1354-94-603

Prepared For:

Unocal Corporation
Diversified Business Group
13 Corporate Square, Suite 200
Atlanta, Ga 30329

Prepared By:

S&ME, Inc.
9751 Southern Pine Blvd., PO Box 7668
Charlotte, NC 28273

June, 1998



Celebrating 25 Years of Excellence

June 18, 1998

Mr. Paul Lindquist
Unocal Corporation
13 Corporate Square, Suite 200
Atlanta, Ga 30329

Reference: May 1998 Groundwater Sampling and
Remediation Status Report
Incident No. 10119, Priority Ranking – High
Unocal Corporation Facility #9787-214, Former Red Horse Truckstop
1342 Trollingwood Road, Mebane, Alamance Co., NC
S&ME Project No. 1354-94-603

Dear Mr. Lindquist:

S&ME, Inc. (S&ME) submits herein the May 1998 groundwater sampling results and status of remediation activities at the subject groundwater incident site #10119, per the State's April 23, 1998 request. This report covers the period from March 18, 1998 through June 4, 1998. This report includes the May 12, 1998 groundwater analytical results for the five monitor wells on-site (MW-3, MW-4, DMW-5, MW-7 and MW-8) and for the hydraulically upgradient Williams water well. This work was performed in accordance with NCDENR Task Authorization #10119-01 dated 10/27/97, which included operation of the air sparge system for 6 months ending in June 1998.

GROUND WATER SURFACE LEVELS

Groundwater surface levels for MW-3, MW-4, DMW-5, MW-7 and MW-8 were measured on May 12, 1998 prior to well sampling and with the sparging system off for one week. The groundwater surface level data obtained on this date is summarized in Table 1 during static (sparging off) conditions. Figure 1 illustrates that groundwater flow on May 12, 1998 is to the north-northwest under an average hydraulic gradient of 0.05. Groundwater flow has been predominantly towards the northwest. Therefore the groundwater flow direction on May 12, 1998 is consistent with previous flow directions since 1993. The easterly flow direction on February 24, 1998 represented

an anomaly, which may have been attributed to residual air sparging effects.

GROUND WATER QUALITY

S&ME sampled groundwater from five monitor wells (MW-3, MW-4, DMW-5, MW-7 and MW-8) on May 12, 1998. Each monitor well was purged of three well volumes or until dry before sampling. Individual, disposable polyethylene bailers and clean nylon rope were used for sampling groundwater from each of the five monitor wells. A water sample was also collected from the spigot closest to the Williams well. The water was purged for approximately 5 minutes prior to sampling from the spigot.

Mr. Williams is not interested in connecting to city water, as indicated to S&ME on May 15, 1998. Mr. Williams well is located approximately 500 feet south (hydraulically upgradient) of MW-3 and 680 feet south of MW-7.

The groundwater samples were analyzed for aromatic organics [including benzene, toluene, ethylbenzene, xylenes (BTEX), methyl-tert-butylether (MTBE) and isopropylether (IPE)] by EPA Method 602, halogenated organics by EPA Method 601 and polynuclear aromatic hydrocarbons by EPA Method 610. All analyses were performed by Flowers Chemical Laboratory of Altamonte Springs, FL (NC certified laboratory #296). A copy of the laboratory results is attached. Table 2 summarizes historical and the most recent ground water quality data. Charts 1 and 2 graphically illustrate historical BTEX, MTBE and PNA concentrations.

All analytes were below laboratory method detection limits, except isopropylether, 1,2-dichloroethane and chloroform. The analytical results indicate that the groundwater beneath the site is in compliance with the 2L groundwater standards excluding 14 micrograms per liter - $\mu\text{g/L}$ of 1,2-dichloroethane in MW-3 and 2.77 $\mu\text{g/L}$ of chloroform in MW-7. The previous reports dated March 19, 1998 and October 10, 1997 indicated very similar conditions. The 2L-

groundwater standards for 1,2-DCA and chloroform are 0.38 µg/L and 0.19 µg/L, respectively.

The remaining low levels of chlorinated organics are not believed to be associated with the Unocal gasoline and diesel releases. No gasoline or diesel compounds were detected above the 15A NCAC 2L .0202 standards. These chlorinated organics are not likely to reach the Williams well, given the hydraulically upgradient position of the well and effects of natural attenuation over time. Furthermore, downgradient monitor well MW-8 revealed no dissolved hydrocarbons above the laboratory method detection limit.

Groundwater quality has improved dramatically for this site due to remedial efforts. Remediation appears to have reached its limits in terms of site clean up in an effective, economical and technologically feasible manner. The active air sparging system has reduced dissolved petroleum hydrocarbons to below method detection levels and or below groundwater standards. Dissolved gasoline and diesel in ground water on-site have reached asymptotic levels below 2L standards.

REMEDIATION SYSTEM STATUS

During this quarter, site remediation has been performed by air sparging only. Air sparging has been very effective in remediation of subsurface hydrocarbons in groundwater on-site, but is not considered useful or economical at this time. At MW-4, combined BTEX and MTBE concentrations have been reduced from 110,000 ug/L on January 18, 1993 to <0.5 µg/L (laboratory detection limit) on May 12, 1998. During the quarter, dissolved 1,2-dichloroethane and chloroform concentrations were reduced by 2.6 µg/L and 0.91 µg/L, respectively. This indicates that continued air sparging is not very effective or economical for further site remediation.

The air sparging system operating as designed during the quarter with no mechanical problems. The compressor operated at 80 psi and 40 scfm (at compressor). Each of the five operating air sparge wells (AS-1, AS-4, AS-5, DMW-5 and AS-6) operated at 40 psi and 5 to 10 scfm. The air

sparging system has operated approximately 20,040 hours (835 days) as of June 4, 1998. The air sparging radius of influence for each of the five vertical air sparge wells was approximately 60 feet, as indicated by a dissolved oxygen level of 6.4 mg/L in monitor well MW-7 (56 feet to AS-5) on May 12, 1998.

RECOMMENDATIONS

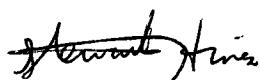
We believe that remediation has reached the limits of clean up of soil and groundwater in an economical and technologically feasible manner. Remediation costs are currently being reimbursed from the State Commercial (91%) and Non-Commercial (9%) Trust Funds. Continued remediation is not believed to be reasonable, necessary or cost effective. The air sparging system will be deactivated in June 1998, as per NCDENR Task Authorization #10119-01 dated 10/27/97, which approved operation of the air sparge system for 6 months ending in June 1998. We recommend permanently deactivating the air sparging system as all gasoline and diesel constituents have been remediated to below 2L groundwater standards. Furthermore, these remaining low levels of chlorinated organics are not expected to reach the closest receptor (Williams well).

We propose one more additional groundwater sampling event in August 1998 after the remediation system has been deactivated to check for possible rebounding. A completed Task Authorization for one additional sampling event and report is attached.

If the August 1998 groundwater analyses indicate similar groundwater quality conditions, we recommend requesting No Further Action.

Please call Stewart Hines of S&ME at 704-523-4726 regarding our recommendations and if you need any additional information.

Sincerely,
S&ME, Inc.



Stewart M. Hines, L.G.
Project Hydrogeologist



Al Quarles SMH

Al Quarles, L.G.
Senior Hydrogeologist

Enclosures

cc: Joe Reynolds - Speedway SuperAmerica LLC (Current Property Owner)
Mr. Williams - adjacent private well owner
Rick Holshouser - S&ME, Inc.

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TABLE 1

S&ME, INC.
LIQUID LEVELS
DATE: 5/12/98

SITE: UNOCAL-MEBANE, NC #9787-214
JOB# 1354-94-603
RECORDED BY: GARY SIMCOX (S&ME)

ID #	DTW	DTP	PT	ETW	ETP	ETC	WTE
MW-3	14.33	0.00	0.00	84.95	NA	99.28	84.95
MW-4	14.14	0.00	0.00	84.46	NA	98.60	84.46
DMW-5	12.99	0.00	0.00	84.12	NA	97.11	84.12
MW-7	16.48	0.00	0.00	81.73	NA	98.21	81.73
MW-8	19.29	0.00	0.00	81.18	NA	100.47	81.18

COMMENTS:

Topographic survey of all wells was re-evaluated on 8/16/96

ALL MEASUREMENTS IN FEET

DTW=depth to water from top of casing

DTP=depth to product

ETC=elevation of top of casing (usu. assumed datum
of 98.21 feet from the former professional survey of MW-7

ETP=elevation of top of product

ETW=elevation of top of water

PT=product thickness

NA=Not Applicable

WTE=elevation of water table

BENCH MARK = MW-7, also elevation of fire hydrant bolt (black) is 100.83

TABLE 2
HISTORICAL GROUNDWATER QUALITY DATA
FORMER UNOCAL FACILITY #9787-214 (FORMER RED HORSE TRUCKS) (OP)
1342 TROLLINGWOOD ROAD, MEbane, NC
S&ME PROJECT #1354-94-003

MONITOR WELL	DATE	BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLENES	TOTAL BTEX	MTBE	IPEx	METHOD 601 COMPOUNDS		METHOD 625/610 COMPOUNDS	
									NA	BQL	NA	BQL
MW - 1 (CLOSED)	1/7/93	BQL	120	BQL	120	240	NA	NA	NA	BQL	NA	BQL
	1/18/93	BQL	BQL	BQL	BQL	BQL	BQL	NA	BQL	BQL	NA	BQL
	11/10/94	BQL	BQL	BQL	BQL	BQL	BQL	NA	BQL	BQL	NA	BQL
	3/12/95	BQL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	BQL	BQL	<0.5	<1
	12/18/95	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	BQL	BQL	<0.5	<1
	5/4/96	MONITOR WELL CLOSED WITH GROUT DUE TO CONFLICT WITH NEW SPEEDWAY STATION PUMP ISLAND					<1	<1	<1	<1	<1	<1
MW - 2 (CLOSED)	1/7/93	810	20,000	17,000	95,000	132,810	NA	NA	NA	BQL	7.9	28
	1/18/93	120	65	4.2	160	349.2	BQL	BQL	NA	BQL	BQL	BQL
	11/10/94	BQL	BQL	BQL	BQL	BQL	BQL	NA	BQL	BQL	NA	BQL
	3/12/95	BQL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	BQL	BQL	<0.5	<1
	12/18/95	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	BQL	BQL	<0.5	<1
	5/4/96	MONITOR WELL CLOSED WITH GROUT DUE TO CONFLICT WITH NEW SPEEDWAY STATION PUMP ISLAND					<1	<1	<1	<1	<1	<1
MW - 3	1/7,11/93	BQL	1300	2100	13,000	16,400	NA	NA	NA	BQL	8.4	22
	1/26/93	84	82	5.1	590	761.1	BQL	BQL	NA	BQL	13.2	BQL
	11/10/94	BQL	BQL	BQL	18.5	184	203	BQL	NA	BQL	3.38	BQL
	3/12/95	BQL	BQL	BQL	BQL	1.52	1.52	0.54	1.73	1.73	7.53	<1
	12/18/95	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5.53	<1
	2/21/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	557	557	31.4	12.6
MW - 4	8/5/96	85	4.01	3.34	465	557	11.7	9.58	4.83	4.83	3.13	
	11/22/96	5.1	<1.5	<1.5	2.72	7.82	1.53	1.53	4.30	11.3	<3	
	2/6/97	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	0.827	6.60	8.94	
	8/14/97	0.827	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	15.08	6.38	17.70	
	2/24/98	13.2	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	1.88	1.88	12.7	
	5/12/98	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	16.6	
MW - 5	1/11/93	BQL	1700	4900	31,000	37,600	NA	NA	NA	BQL	6.8	6600
	1/18/93	26,800	42,000	5200	24,000	98,000	12,000	12,000	NA	NA	431.5	
	11/10/94	22,100	40,100	4710	20,500	87,400	15,700	15,700	NA	NA	2710	
	3/12/95	3150	4480	1830	2250	11,700	4370	4370	NA	NA	787.58	
	12/18/95	2840	5700	1170	5310	15000	3750	3750	NA	NA	119.3	
	2/21/96	821	1340	344	1990	4490	1810	1810	NA	NA		
MW - 6	5/9/96	WELL CONVERTED TO AN AIR SPARGE/MONITOR WELL					<1	<1	<1	<1	<1	
	8/12/96	6.1	13.5	<5	27.6	47.2	165	165	<10	<10	<5-50	
	11/26/96	4.59	16.2	<3	37	60.3	410	410	<6	<6	<3-30	
	2/8/97	3.7	11.1	3.7	64.1	82.6	654	654	<6	<6	<3-30	
	8/14/97	<0.60	<1.5	<1.5	<1.5	<1.5	74.70	74.70	<3	<3	<15-300	
	2/24/98	<12	<30	<30	<30	<30	141	141	<60	<60	<15-300	
15A NCAC 2 STANDARD (IN UG/L)	1	1000	20	500	NA	200	70	70	0.38	0.38	1,2-DICHLOROETHANE	
											SEE 21 STANDARDS	

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NOTES:

* ALL CONCENTRATIONS IN GROUNDWATER ARE IN UG/L (PPB)
* ANALYSES PERFORMED = METHODS 602 (BTX, MTBE AND PE)
METHOD 601 (PURGEABLE HALOCARBONS)

METHOD 610 (SEMI-VOLATILES)

* THE 15A NCAC 2L GROUNDWATER STANDARD FOR COMPOUNDS NOT INCLUDED IN THE STANDARD IS THE LABORATORY METHOD DETECTION LIMIT

TABLE 2
HISTORICAL GROUNDWATER QUALITY DATA
FORMER UNOCAL FACILITY #9787-214 (FORMER RED HORSE TRUCKSTOP)
1342 TROLLINGWOOD ROAD, MEbane, NC
S&ME PROJECT #1354-94-603

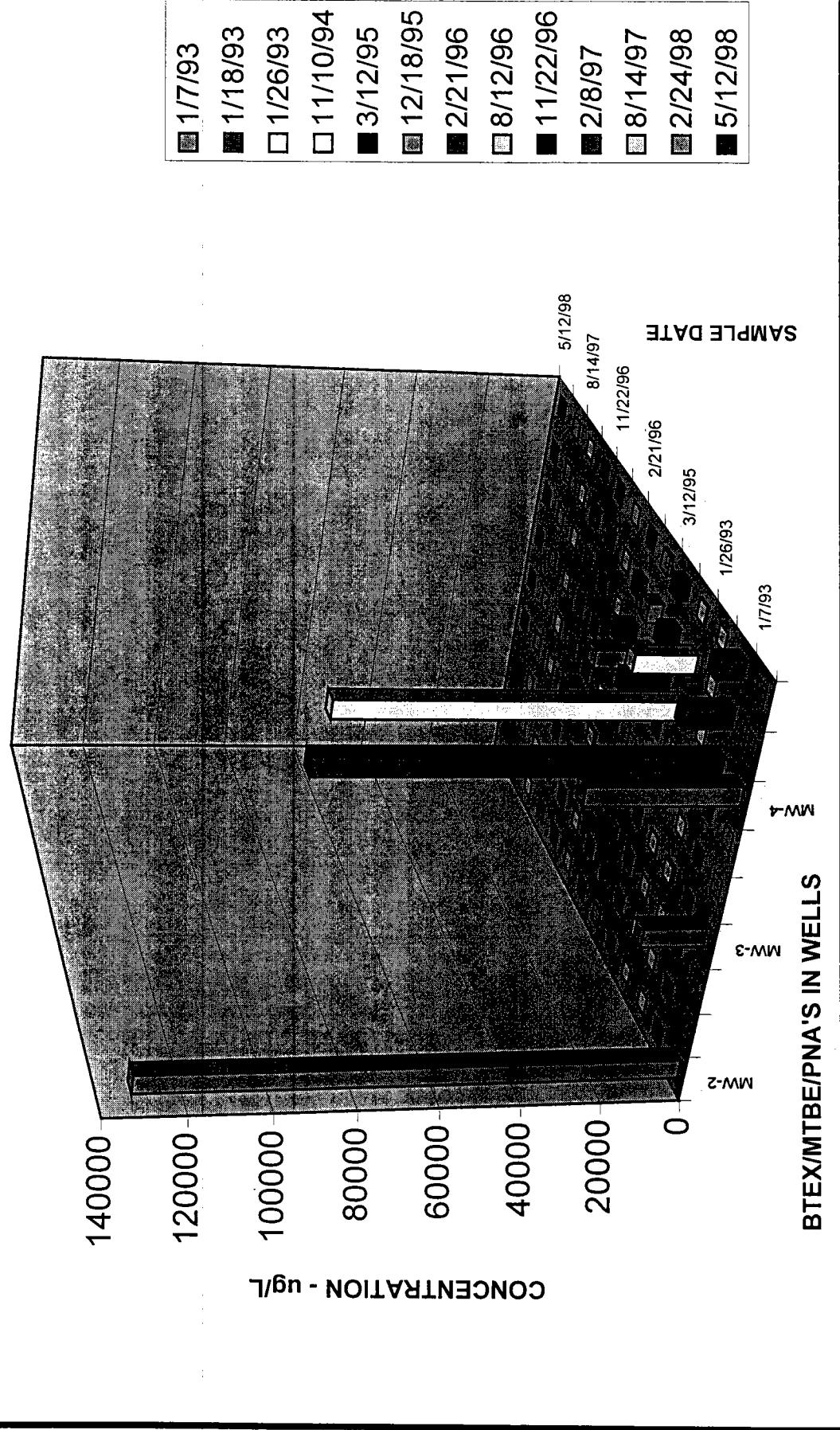
MONITOR WELL	DATE	BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLENES	TOTAL BTEX	MTBE	IPE	METHOD 601 COMPOUNDS	METHOD 625/610 COMPOUNDS
DW-5 (TYPE III MW)	3/24/93	55	95	<0.5	<0.5	120	NA	NA	NA	NA
	8/19/94	WELL CONVERTED TO AN AIR SPARGE/MONITOR WELL			<0.5	<0.5	<0.5	<1	<0.5-5	<1
	12/18/95	<0.5	0.5	0.5	0.5	0.5	0.5	<1	<0.5-5	<1
	8/5/96	0.5	16.2	<1.5	<1.5	<1.5	16.2	<1.5	BQL	BQL
	11/22/96	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<3	<3-15	<3
	2/8/97	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<3	<0.5-5	<1
	8/14/97	<0.6	<1.5	<1.5	<1.5	<1.5	<1.5	<3	<0.9-15	<3
MW-6 (CLOSED)	2/24/98	<0.6	<1.5	<1.5	<1.5	<1.5	<1.5	<3	<0.25-5	<1
	5/12/98	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.25-5	<1
	3/17/93	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
	11/10/94	BQL	BQL	BQL	BQL	BQL	BQL	NA	BQL	BQL
	3/12/95	BQL	1.61	0.754	4.16	6.52	BQL	BQL	BQL	BQL
MW-7	12/18/95	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5-5	<1
	2/21/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5-5	<1
	5/4/96	MONITOR WELL CLOSED DUE TO CONFLICT WITH NEW SPEEDWAY STATION PRODUCT LINES								
	3/8/97/93	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
	11/10/94	BQL	BQL	BQL	BQL	BQL	BQL	NA	NA	NA
MW-8	3/12/95	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
	12/18/95	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5-5	<1
	2/21/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5-5	<1
	8/5/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5-5	<1
	11/22/96	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	BQL	BQL
	2/8/97	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<3-15	<3
	8/14/97	<0.6	<1.5	<1.5	<1.5	<1.5	<1.5	<3	1.78	<3
WILLIAMS WELL	2/24/98	<0.6	<1.5	<1.5	<1.5	<1.5	<1.5	<3	3.68	<3
	5/12/98	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	2.77-chloroform	<1
	8/12/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5-5	<1
	11/22/96	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<3	BQL	BQL
	2/8/97	<3	<3	<3	<3	<3	<3	<6	<3-30	<3
15A NCAC 2L STANDARD (IN ug/L)	8/14/97	<0.6	<1.5	<1.5	<1.5	<1.5	<1.5	<3	<0.75-15	<3
	2/24/98	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<3	<0.75-15	<3
	5/12/98	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.25-5	<1
	1	1000	20	500	NA	200	70	0.38 - 1,2-DICHLOROETHANE	SEE 21 STANDARDS	
								0.19 - CHLOROFORM		

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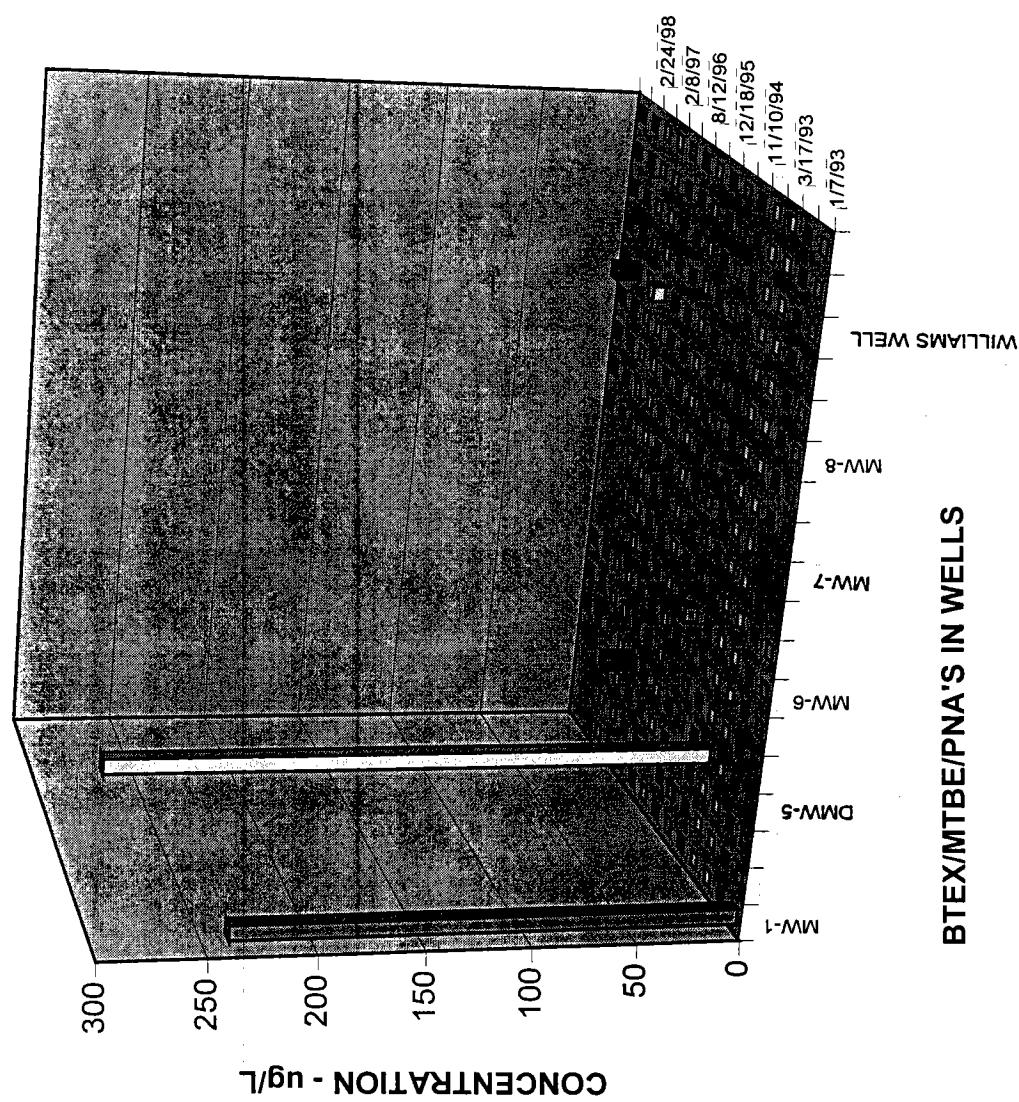
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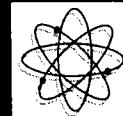
- * ALL CONCENTRATIONS IN GROUNDWATER ARE IN ug/L (PPB)
- * ANALYSES PERFORMED = METHODS 602 (BTEX, MTBE AND IPE),
METHOD 601 (PURGEABLE HALOCARBONS)
- * THE 15A NCAC 2L GROUNDWATER STANDARD FOR COMPOUNDS NOT INCLUDED IN THE STANDARD IS THE LABORATORY METHOD DETECTION LIMIT

CHART 1 - UNOCAL-MEBANE, NC #9787-214
HISTORICAL GROUNDWATER QUALITY DATA



**CHART 2 - UNOCAL-MEBANE, NC #9787-214
HISTORICAL GROUNDWATER QUALITY DATA**





Received From:

S&ME-Charlotte
P.O. Box 7668
Charlotte, NC 28241

Date Reported : May29 1998
Project Number : UNOCAFE833592778
PO Number : 9787-214
FDHRSDW Number : 83139
NYSDOH Number : 11595
FDER COMQAPNum : 86-0008G
LDHH Number : 94-23
NCDEHNR Number : 296
SCDHEC Number : 96019

For: EPA601 IPE602 PAH X610

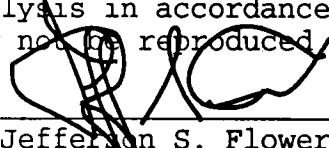
Date Sampled:May12 1998 Date Received:May15 1998 Lab Numbers: 10859-10864

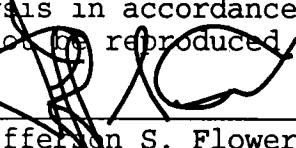
REPORT OF ANALYSIS

Parameter	Unit	Method	%ACC	%PRC	10859 MW7	10860 MW8	10861 MW4	10862 MW3	10863 WILLIA MS
Dilution_Factor		Detection	-	-	1.00	1.00	1.00	1.00	1.00
Limit		Limit	-	-	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,1-trichloroethane ug/L	ug/L		1.00	89.0	1.28	<1.00	<1.00	<1.00	<1.00
1,1,2,2-tetrachloroethane ug/L	ug/L		1.00	96.0	.840	<1.00	<1.00	<1.00	<1.00
1,1,2-trichloroethane ug/L	ug/L		1.00	90.5	3.13	<1.00	<1.00	<1.00	<1.00
1,1-dichloroethane ug/L	ug/L		1.00	90.4	2.43	<1.00	<1.00	<1.00	<1.00
1,1-dichloroethene ug/L	ug/L		1.00	106.	1.22	<1.00	<1.00	<1.00	<1.00
1,2-dichloroethane ug/L	ug/L		0.300	87.2	2.64	<0.300	<0.300	<0.300	14.0 <0.300
1,2-dichloropropane ug/L	ug/L		0.250	99.9	1.04	<0.250	<0.250	<0.250	<0.250
2-chloroethylvinylet ug/L	ug/L		1.00			<1.00	<1.00	<1.00	<1.00
Bromodichloromethane ug/L	ug/L		1.00	89.0	1.49	<1.00	<1.00	<1.00	<1.00
Bromoform ug/L	ug/L		1.00	106.	1.01	<1.00	<1.00	<1.00	<1.00
cis-1,3-dichloroprop ug/L	ug/L		1.00	86.9	1.66	<1.00	<1.00	<1.00	<1.00
Carbon tetrachloride ug/L	ug/L		1.00	89.2	3.15	<1.00	<1.00	<1.00	<1.00
Chloroform ug/L	ug/L		0.300	82.7	1.01	2.77	<0.300	<0.300	<0.300
Dibromochloromethane ug/L	ug/L		1.00	93.6	3.04	<1.00	<1.00	<1.00	<1.00
Methylene chloride ug/L	ug/L		1.00	94.3	.000	<1.00	<1.00	<1.00	<1.00
trans-1,3,-dichlorop ug/L	ug/L		1.00	89.4	2.80	<1.00	<1.00	<1.00	<1.00
Trichlorofluorometha ug/L	ug/L		2.00	99.8	5.58	<2.00	<2.00	<2.00	<2.00
t-1,2-dichloroethene ug/L	ug/L		1.00	81.6	.930	<1.00	<1.00	<1.00	<1.00
Trichloroethene ug/L	ug/L		1.00	91.7	2.40	<1.00	<1.00	<1.00	<1.00
Tetrachloroethene ug/L	ug/L		1.00	98.6	2.77	<1.00	<1.00	<1.00	<1.00
1,2-dibromo-3-chloro ug/L	ug/L		1.00	114.	1.78	<1.00	<1.00	<1.00	<1.00
Bromomethane ug/L	ug/L		5.00			<5.00	<5.00	<5.00	<5.00
Chlorobenzene ug/L	ug/L		0.500	94.7	1.47	<0.500	<0.500	<0.500	<0.500
Chloroethane ug/L	ug/L		3.00	102.	2.85	<3.00	<3.00	<3.00	<3.00
Chloromethane ug/L	ug/L		5.00			<5.00	<5.00	<5.00	<5.00

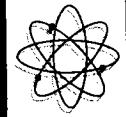
Data Release Authorization

Sample integrity certified prior to analysis. Deficiencies are in QA Report Sec.4
Methods of analysis in accordance with FCL QA and EPA approved methodology.
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 President/Technical Director

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Received From:

S&ME-Charlotte
P.O. Box 7668
Charlotte, NC 28241

Date Reported : May29 1998
Project Number : UNOCAFE833592778
PO Number : 9787-214
FDHRSDW Number : 83139
NYSDOH Number : 11595
FDER COMQAPNum : 86-0008G
LDHH Number : 94-23
NCDEHNR Number : 296
SCDHEC Number : 96019

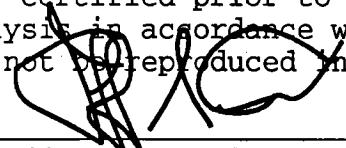
For: EPA601 IPE602 PAH X610

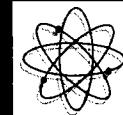
Date Sampled: May12 1998 Date Received: May15 1998 Lab Numbers: 10859-10864
REPORT OF ANALYSIS

Parameter	Unit	Method	%ACC	%PRC	DMW5	10864
		Detection				
		Limit				
Dilution_Factor		-	-	-	1.00	
1,1,1-trichloroethane ug/L	ug/L	1.00	89.0	1.28	<1.00	
1,1,2,2-tetrachloroethane ug/L	ug/L	1.00	96.0	.840	<1.00	
1,1,2-trichloroethane ug/L	ug/L	1.00	90.5	3.13	<1.00	
1,1-dichloroethane ug/L	ug/L	1.00	90.4	2.43	<1.00	
1,1-dichloroethene ug/L	ug/L	1.00	106.	1.22	<1.00	
1,2-dichloroethane ug/L	ug/L	0.300	87.2	2.64	<0.300	
1,2-dichloropropane ug/L	ug/L	0.250	99.9	1.04	<0.250	
2-chloroethylvinylet ug/L	ug/L	1.00			<1.00	
Bromodichloromethane ug/L	ug/L	1.00	89.0	1.49	<1.00	
Bromoform ug/L	ug/L	1.00	106.	1.01	<1.00	
cis-1,3-dichloroprop ug/L	ug/L	1.00	86.9	1.66	<1.00	
Carbon tetrachloride ug/L	ug/L	1.00	89.2	3.15	<1.00	
Chloroform ug/L	ug/L	0.300	82.7	1.01	<0.300	
Dibromochloromethane ug/L	ug/L	1.00	93.6	3.04	<1.00	
Methylene chloride ug/L	ug/L	1.00	94.3	.000	<1.00	
trans-1,3,-dichlorop ug/L	ug/L	1.00	89.4	2.80	<1.00	
Trichlorofluorometha ug/L	ug/L	2.00	99.8	5.58	<2.00	
t-1,2-dichloroethene ug/L	ug/L	1.00	81.6	.930	<1.00	
Trichloroethene ug/L	ug/L	1.00	91.7	2.40	<1.00	
Tetrachloroethene ug/L	ug/L	1.00	98.6	2.77	<1.00	
1,2-dibromo-3-chloro ug/L	ug/L	1.00	114.	1.78	<1.00	
Bromomethane ug/L	ug/L	5.00			<5.00	
Chlorobenzene ug/L	ug/L	0.500	94.7	1.47	<0.500	
Chloroethane ug/L	ug/L	3.00	102.	2.85	<3.00	
Chloromethane ug/L	ug/L	5.00			<5.00	

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S&ME-Charlotte
P.O. Box 7668
Charlotte, NC 28241

Date Reported : May 29 1998
Project Number : UNOCAFE833592778
PO Number : 9787-214
FDHRSDW Number : 83139
NYSDOH Number : 11595
FDER COMQAPNum : 86-0008G
LDHH Number : 94-23
NCDEHNR Number : 296
SCDHEC Number : 96019

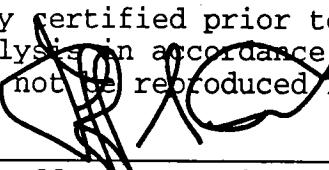
For: EPA601 IPE602 PAH X610

Date Sampled: May 12 1998 Date Received: May 15 1998 Lab Numbers: 10859-10864
REPORT OF ANALYSIS

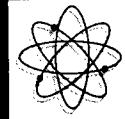
Parameter	Unit	Method	%ACC	%PRC	10859 MW7	10860 MW8	10861 MW4	10862 MW3	10863 WILLIA MS
Dichlorodifluorometh	ug/L		2.00		<2.00	<2.00	<2.00	<2.00	<2.00
Vinyl chloride	ug/L		0.500		<0.500	<0.500	<0.500	<0.500	<0.500
o-dichlorobenzene	ug/L		0.500	91.4	4.93	<0.500	<0.500	<0.500	<0.500
m-dichlorobenzene	ug/L		0.500	93.2	1.74	<0.500	<0.500	<0.500	<0.500
Para-dichlorobenzene	ug/L		0.500	95.5	1.24	<0.500	<0.500	<0.500	<0.500
Hall_Spike	ug/L		0.500	114.	2.13	115.	115.	112.	115.
Dilution_Factor			-	-	-	-	-	-	-
o-dichlorobenzene	ug/L		0.500	91.4	4.93	<0.500	<0.500	<0.500	<0.500
m-dichlorobenzene	ug/L		0.500	93.2	1.74	<0.500	<0.500	<0.500	<0.500
Para-dichlorobenzene	ug/L		0.500	95.5	1.24	<0.500	<0.500	<0.500	<0.500
Benzene	ug/L		0.200	84.7	.940	<0.200	<0.200	<0.200	<0.200
Chlorobenzene	ug/L		0.500	94.7	1.47	<0.500	<0.500	<0.500	<0.500
Ethylbenzene	ug/L		0.500	86.8	.930	<0.500	<0.500	<0.500	<0.500
Toluene	ug/L		0.500	84.6	1.13	<0.500	<0.500	<0.500	<0.500
Xylene	ug/L		0.500	87.3	1.32	<0.500	<0.500	<0.500	<0.500
Methyl-tert-butyleth	ug/L		0.500	91.6	1.54	<0.500	<0.500	<0.500	<0.500
Total_BTEX	ug/L		0.500	86.3	1.16	<0.500	<0.500	<0.500	<0.500
Isopropylether	ug/L		1.00			<1.00	<1.00	<1.00	12.5
PID_Spike	ug/L		0.500	92.9	.000	89.6	89.7	89.2	89.8
Acenaphthylene	ug/L		1.00	71.0	3.46	<1.00	<1.00	<1.00	<1.00
Acenaphthene	ug/L		1.00	61.0	4.52	<1.00	<1.00	<1.00	<1.00
Anthracene	ug/L		1.00	79.1	2.75	<1.00	<1.00	<1.00	<1.00
Benzo(a)anthracene	ug/L		1.00	75.9	8.38	<1.00	<1.00	<1.00	<1.00
Benzo(a)pyrene	ug/L		1.00	89.1	5.45	<1.00	<1.00	<1.00	<1.00

Data Release Authorization

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FAX: (407) 260-6110



Received From:

S&ME-Charlotte
P.O. Box 7668
Charlotte, NC 28241

Date Reported : May29 1998
Project Number : UNOCAFE833592778
PO Number : 9787-214
FDHRS DW Number : 83139
NYSDOH Number : 11595
FDER COMQAPNum : 86-0008G
LDHH Number : 94-23
NCDEHNR Number : 296
SCDHEC Number : 96019

For: EPA601 IPE602 PAH X610

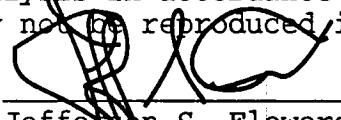
Date Sampled: May12 1998 Date Received: May15 1998 Lab Numbers: 10859-10864
REPORT OF ANALYSIS

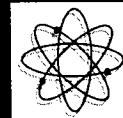
10864

Parameter	Unit	Method	%ACC	%PRC	DMW5
	Detection				
	Limit				
Dichlorodifluorometh	ug/L	2.00			<2.00
Vinyl chloride	ug/L	0.500			<0.500
o-dichlorobenzene	ug/L	0.500	91.4	4.93	<0.500
m-dichlorobenzene	ug/L	0.500	93.2	1.74	<0.500
Para-dichlorobenzene	ug/L	0.500	95.5	1.24	<0.500
Hall_Spike	ug/L	0.500	114.	2.13	115.
	- - -	- - -	- - -	- - -	- - -
Dilution_Factor		-	-	-	1.00
o-dichlorobenzene	ug/L	0.500	91.4	4.93	<0.500
m-dichlorobenzene	ug/L	0.500	93.2	1.74	<0.500
Para-dichlorobenzene	ug/L	0.500	95.5	1.24	<0.500
Benzene	ug/L	0.200	84.7	.940	<0.200
Chlorobenzene	ug/L	0.500	94.7	1.47	<0.500
Ethylbenzene	ug/L	0.500	86.8	.930	<0.500
Toluene	ug/L	0.500	84.6	1.13	<0.500
Xylene	ug/L	0.500	87.3	1.32	<0.500
Methyl-tert-butyleth	ug/L	0.500	91.6	1.54	<0.500
Total_BTEX	ug/L	0.500	86.3	1.16	<0.500
Isopropylether	ug/L	1.00			<1.00
PID_Spike	ug/L	0.500	92.9	.000	89.8
	- - -	- - -	- - -	- - -	- - -
Acenaphthylene	ug/L	1.00	71.0	3.46	<1.00
Acenaphthene	ug/L	1.00	61.0	4.52	<1.00
Anthracene	ug/L	1.00	79.1	2.75	<1.00
Benzo(a)anthracene	ug/L	1.00	75.9	8.38	<1.00
Benzo(a)pyrene	ug/L	1.00	89.1	5.45	<1.00

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Date Reported : May29 1998
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 PO Number : 9787-214
 FDHRSDW Number : 83139
 NYSDOH Number : 11595
 FDER COMQAPNum : 86-0008G
 LDHH Number : 94-23
 NCDEHNR Number : 296
 SCDHEC Number : 96019

For: EPA601 IPE602 PAH X610

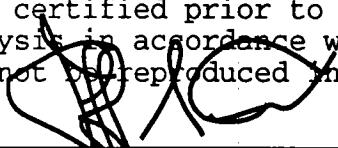
Date Sampled: May12 1998 Date Received: May15 1998 Lab Numbers: 10859-10864

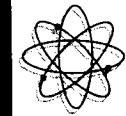
REPORT OF ANALYSIS

Parameter	Unit	Method	%ACC	%PRC	10859 MW7	10860 MW8	10861 MW4	10862 MW3	10863 WILLIA MS
		Detection							
		Limit							
Benzo(b)fluoranthene	ug/L		1.00		<1.00	<1.00	<1.00	<1.00	<1.00
Benzo(g,h,i)perylene	ug/L		1.00	86.1	8.96	<1.00	<1.00	<1.00	<1.00
Benzo(k)fluoranthene	ug/L		1.00	91.2	2.77	<1.00	<1.00	<1.00	<1.00
Chrysene	ug/L		1.00	92.4	2.51	<1.00	<1.00	<1.00	<1.00
Dibnz(a,h)anthracene	ug/L		1.00			<1.00	<1.00	<1.00	<1.00
Fluoranthene	ug/L		1.00	82.4	5.32	<1.00	<1.00	<1.00	<1.00
Fluorene	ug/L		1.00	71.5	4.48	<1.00	<1.00	<1.00	<1.00
Indn(1,2,3-cd)pyrene	ug/L		1.00	87.4	10.0	<1.00	<1.00	<1.00	<1.00
Naphthalene	ug/L		1.00	66.8	7.54	<1.00	<1.00	<1.00	<1.00
1-methyl-Naphthalene	ug/L		1.00	73.3	7.80	<1.00	<1.00	<1.00	<1.00
2-methyl-Naphthalene	ug/L		1.00	59.0	7.84	<1.00	<1.00	<1.00	<1.00
Phenanthrene	ug/L		1.00	61.8	3.54	<1.00	<1.00	<1.00	<1.00
Pyrene	ug/L		1.00	87.1	.700	<1.00	<1.00	<1.00	<1.00
Intl_QA_Spike(2FBP)	ug/L		1.00	64.7	5.83	49.6	67.3	54.7	63.9
Surr_Spike(DBBP)	ug/L		1.00	78.2	7.09	74.4	81.0	46.5	80.5
PAH_Extraction	ml		-			800.	1000	400.	1000

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For: EPA601 IPE602 PAH X610

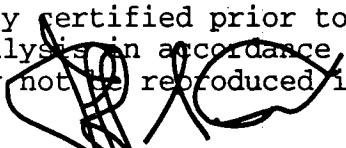
Date Sampled: May12 1998 Date Received: May15 1998 Lab Numbers: 10859-10864

REPORT OF ANALYSIS

Parameter	Unit	Method	%ACC	%PRC	DMW5	10864
		Detection				
		Limit				
Benzo(b)fluoranthene	ug/L	1.00			<1.00	
Benzo(g,h,i)perylene	ug/L	1.00	86.1	8.96	<1.00	
Benzo(k)fluoranthene	ug/L	1.00	91.2	2.77	<1.00	
Chrysene	ug/L	1.00	92.4	2.51	<1.00	
Dibnz(a,h)anthracene	ug/L	1.00			<1.00	
Fluoranthene	ug/L	1.00	82.4	5.32	<1.00	
Fluorene	ug/L	1.00	71.5	4.48	<1.00	
Indn(1,2,3-cd)pyrene	ug/L	1.00	87.4	10.0	<1.00	
Naphthalene	ug/L	1.00	66.8	7.54	<1.00	
1-methyl-Naphthalene	ug/L	1.00	73.3	7.80	<1.00	
2-methyl-Naphthalene	ug/L	1.00	59.0	7.84	<1.00	
Phenanthrene	ug/L	1.00	61.8	3.54	<1.00	
Pyrene	ug/L	1.00	87.1	.700	<1.00	
Intl_QA_Spike(2FBP)	ug/L	1.00	64.7	5.83	67.8	
Surr_Spike(DBBP)	ug/L	1.00	78.2	7.09	80.4	
PAH_Extraction	ml	-			1000	

Data Release Authorization

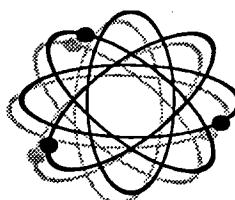
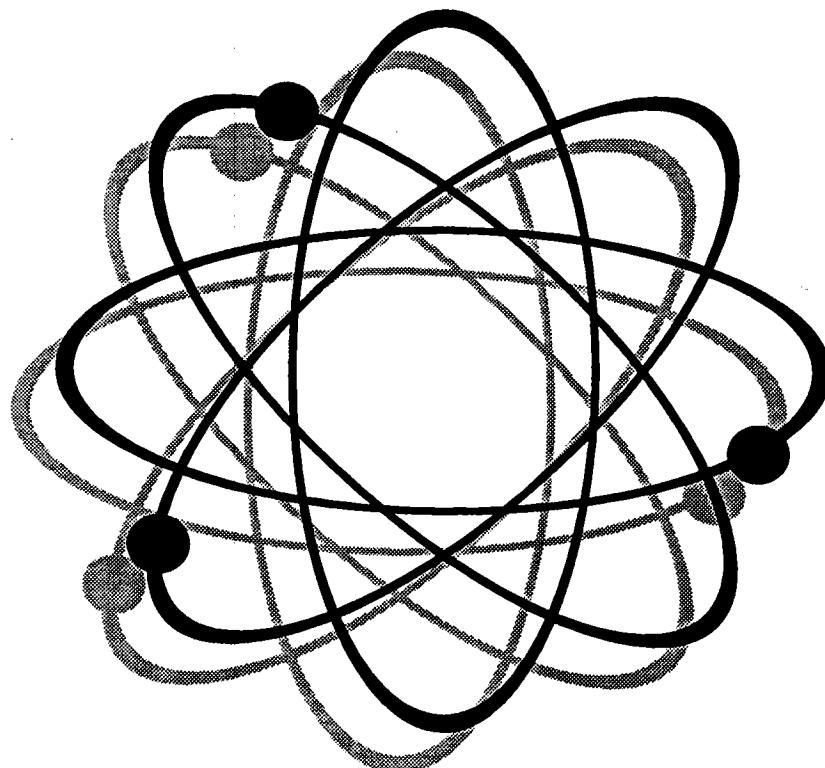
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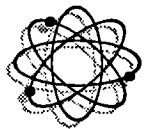

Jefferson S. Flowers, Ph.d.
President/Technical Director

Quality Assurance Report

Prepared for: S&ME-Charlotte
Project Number: UNOCAFE833592778
Lab Numbers: 10859 - 10864

Report date: 29-May-98





FLOWERS CHEMICAL LABORATORIES, INC.

QA Conformance Summary

Client: S&ME-Charlotte
Project Number: UNOCAFE833592778
P.O. Number: 9787-214
Date Sampled: 12-May-98
Lab Numbers: 10859 - 10864

Sample Handling

Sample handling and holding time criteria were met for all samples.
Samples Collected by Submitter.

Surrogate Compound Recoveries:

The recovery limits were met for all samples as shown in section 1. This represents complete success.

Accuracy / Precision:

The recovery limits were met for all compounds in the matrix spike as shown in section 2.

The recovery limits were met for all compounds in the matrix spike duplicate as shown in section 2.

The RSD was met for all compounds as shown in section 2.

Method Blanks:

No target compounds were found in the method blank in excess of the method limit as shown in section 3.

QCCS Check Sample:

The control limits were met for all compounds as shown in section 4.

Standards Traceability:

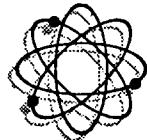
The t-test limits were met for all calibration standards as shown in section 5.

The t-test limits were exceeded for 2 QCCS standards as shown in section 5. This represents a 96.4% success rate.

The t-test limits were exceeded for 2 matrix spike standards as shown in section 5. This represents a 96.4% success rate.

There were 18 standard blanks.

The t-test limits were exceeded for 6 surrogate spike standards as shown in section 5. This represents a -50.0% success rate.



FLOWERS CHEMICAL LABORATORIES, INC.

QA Section 1

Surrogate Compound Recovery

Client: S&ME-Charlotte
Project Number: UNOCAFE833592778
P.O. Number: 9787-214
Date Sampled: 12-May-98
Lab Numbers: 10859 - 10864

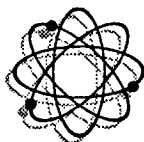
Hall_Spike for EPA601

Surrogate Expected: 100

Unit of measure: ug/L

Acceptability Limits: 71.4 - 139

Laboratory Number	Site Description	Surrogate Recovered	Percent Recovered
10859	MW7	115	115
10860	MW8	115	115
10861	MW4	112	112
10862	MW3	115	115
10863	Williams	114	114
10864	DMW5	115	115



FLOWERS CHEMICAL LABORATORIES, INC.

QA Section 1

Surrogate Compound Recovery

Client: S&ME-Charlotte
Project Number: UNOCAFE833592778
P.O. Number: 9787-214
Date Sampled: 12-May-98
Lab Numbers: 10859 - 10864

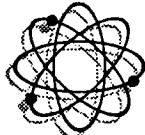
PID_Spike for EPA602

Surrogate Expected: 100

Unit of measure: ug/L

Acceptability Limits: 65.1 - 124

Laboratory Number	Site Description	Surrogate Recovered	Percent Recovered
10859	MW7	89.6	89.6
10860	MW8	89.7	89.7
10861	MW4	89.2	89.2
10862	MW3	89.8	89.8
10863	Williams	90.2	90.2
10864	DMW5	89.8	89.8



FLOWERS CHEMICAL LABORATORIES, INC.

QA Section 1

Surrogate Compound Recovery

Client: S&ME-Charlotte
Project Number: UNOCAFE833592778
P.O. Number: 9787-214
Date Sampled: 12-May-98
Lab Numbers: 10859 - 10864

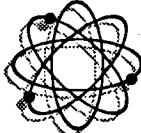
Surr_Spike(2FBP) for EPA625

Surrogate Expected: 100

Unit of measure: ug/L

Acceptability Limits: 41.5 - 78.3

Laboratory Number	Site Description	Surrogate Recovered	Percent Recovered
10859	MW7	49.6	49.6
10860	MW8	67.3	67.3
10861	MW4	54.7	54.7
10862	MW3	63.9	63.9
10863	Williams	64.9	64.9
10864	DMW5	67.8	67.8



FLOWERS CHEMICAL LABORATORIES, INC.

QA Section 1

Surrogate Compound Recovery

Client: S&ME-Charlotte
Project Number: UNOCAFE833592778
P.O. Number: 9787-214
Date Sampled: 12-May-98
Lab Numbers: 10859 - 10864

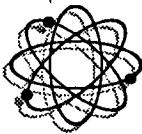
Surr_Spike(DBBP) for EPA625

Surrogate Expected: 100

Unit of measure: ug/L

Acceptability Limits: 33.5 - 114

Laboratory Number	Site Description	Surrogate Recovered	Percent Recovered
10859	MW7	74.4	74.4
10860	MW8	81.0	81.0
10861	MW4	46.5	46.5
10862	MW3	80.5	80.5
10863	Williams	92.5	92.5
10864	DMW5	80.4	80.4



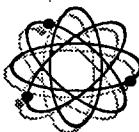
FLOWERS CHEMICAL LABORATORIES, INC.

QA Section 2

Matrix Spike Recovery

Client: S&ME-Charlotte
Project Number: UNOCAFE833592778
P.O. Number: 9787-214
Date Sampled: 12-May-98
Lab Numbers: 10859 - 10864

Analyte	Unit	Analysis Method	Date	Spike Added	Sample Conc.	MS Conc.	MS Rec.	MSD Conc.	MSD Rec.	Acceptable Limits	STD Rec.	Acceptable Limits
1,1,1-trichloroethane	ug/L	EPA601	05-18-98	32.0	<1	28.2	88.1%	28.8	90.0%	21.0 - 42.0	0.424	0 - 5.68
1,1,2,2-tetrachloroethane	ug/L	EPA601	05-18-98	32.0	<1	30.5	95.3%	30.9	96.6%	21.5 - 42.4	0.283	0 - 5.50
1,1,2-trichloroethane	ug/L	EPA601	05-18-98	32.0	<1	28.3	88.4%	29.6	92.5%	20.8 - 41.3	0.919	0 - 5.75
1,1-dichloroethane	ug/L	EPA601	05-18-98	32.0	<1	28.4	88.8%	29.4	91.9%	22.0 - 40.7	0.707	0 - 5.37
1,1-dichloroethene	ug/L	EPA601	05-18-98	32.0	<1	33.7	105%	34.3	107%	19.5 - 43.7	0.424	0 - 7.06
1,2-dichloroethane	ug/L	EPA601	05-18-98	32.0	<0.3	27.4	85.6%	28.4	88.8%	20.2 - 41.5	0.707	0 - 6.80
1,2-dichloropropane	ug/L	EPA601	05-18-98	32.0	<0.25	31.7	99.1%	32.2	101%	20.8 - 44.4	0.354	0 - 6.52
Bromodichloromethane	ug/L	EPA601	05-18-98	32.0	<1	28.2	88.1%	28.8	90.0%	21.7 - 40.4	0.424	0 - 5.22
Bromoform	ug/L	EPA601	05-18-98	32.0	<1	33.8	106%	34.3	107%	18.1 - 46.5	0.354	0 - 7.31
cis-1,3-dichloropropene	ug/L	EPA601	05-18-98	32.0	<1	27.5	85.9%	28.1	87.8%	22.7 - 39.5	0.424	0 - 4.57
Carbon tetrachloride	ug/L	EPA601	05-18-98	32.0	<1	27.9	87.2%	29.2	91.3%	21.4 - 41.8	0.919	0 - 5.96
Chloroform	ug/L	EPA601	05-18-98	32.0	11.4	37.6	81.9%	38.1	83.4%	28.5 - 51.5	0.354	0 - 6.75
Dibromochloromethane	ug/L	EPA601	05-18-98	32.0	<1	29.3	91.6%	30.6	95.6%	20.8 - 42.1	0.919	0 - 5.44
Methylene chloride	ug/L	EPA601	05-18-98	32.0	<1	30.2	94.4%	30.2	94.4%	20.5 - 37.7	0.000	0 - 5.04
trans-1,3,-dichloropropene	ug/L	EPA601	05-18-98	32.0	<1	28.0	87.5%	29.2	91.3%	22.2 - 40.4	0.849	0 - 4.61
Trichlorofluoromethane	ug/L	EPA601	05-18-98	32.0	<2	33.2	104%	30.7	95.9%	18.0 - 44.9	1.77	0 - 7.43
t-1,2-dichloroethene	ug/L	EPA601	05-18-98	32.0	<1	25.9	80.9%	26.3	82.2%	21.4 - 38.7	0.283	0 - 5.38
Trichloroethene	ug/L	EPA601	05-18-98	32.0	<1	28.8	90.0%	29.8	93.1%	20.0 - 42.5	0.707	0 - 6.54
Tetrachloroethene	ug/L	EPA601	05-18-98	32.0	<1	30.9	96.6%	32.2	101%	19.1 - 44.9	0.919	0 - 7.68
1,2-dibromo-3-chloropropan	ug/L	EPA601	05-18-98	32.0	<1	36.1	113%	37.0	116%	18.8 - 47.1	0.636	0 - 6.62
Chloroethane	ug/L	EPA601	05-18-98	32.0	<3	33.2	104%	31.9	99.7%	17.3 - 44.4	0.919	0 - 8.63
o-dichlorobenzene	ug/L	EPA601	05-18-98	32.0	<0.5	28.2	88.1%	30.3	94.7%	21.9 - 40.9	1.48	0 - 5.61
m-dichlorobenzene	ug/L	EPA601	05-18-98	32.0	<0.5	29.5	92.2%	30.2	94.4%	22.1 - 41.3	0.495	0 - 5.78
o-dichlorobenzene	ug/L	EPA602	05-18-98	32.0	<0.5	28.2	88.1%	30.3	94.7%	21.0 - 41.2	1.48	0 - 5.11
m-dichlorobenzene	ug/L	EPA602	05-18-98	32.0	<0.5	29.5	92.2%	30.2	94.4%	19.8 - 43.2	0.495	0 - 6.41
Para-dichlorobenzene	ug/L	EPA602	05-18-98	32.0	<0.5	30.3	94.7%	30.8	96.3%	19.4 - 43.8	0.354	0 - 6.85
Benzene	ug/L	EPA602	05-18-98	32.0	<0.2	26.9	84.1%	27.3	85.3%	22.5 - 39.9	0.283	0 - 4.58
Chlorobenzene	ug/L	EPA602	05-18-98	32.0	<0.5	30.0	93.8%	30.6	95.6%	22.3 - 43.0	0.424	0 - 5.39
Ethylbenzene	ug/L	EPA602	05-18-98	32.0	<0.5	27.6	86.3%	27.9	87.2%	23.4 - 39.7	0.212	0 - 4.11



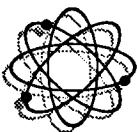
FLOWERS CHEMICAL LABORATORIES, INC.

QA Section 2

Matrix Spike Recovery

Client: S&ME-Charlotte
Project Number: UNOCAFE833592778
P.O. Number: 9787-214
Date Sampled: 12-May-98
Lab Numbers: 10859 - 10864

Analyte	Unit	Analysis Method	Date	Spike Added	Sample Conc.	MS Conc.	MS Rec.	MSD Conc.	MSD Rec.	Acceptable Limits	STD Rec.	Acceptable Limits
Toluene	ug/L	EPA602	05-18-98	32.0	<0.5	26.9	84.1%	27.3	85.3%	22.0 - 40.3	0.283	0 - 4.77
Xylene	ug/L	EPA602	05-18-98	96.0	<0.5	83.0	86.5%	84.6	88.1%	63.6 - 125	1.13	0 - 17.7
Methyl-tert-butylether	ug/L	EPA602	05-18-98	32.0	<0.5	29.0	90.6%	29.6	92.5%	19.0 - 39.6	0.424	0 - 6.06
Total_BTEX	ug/L	EPA602	05-18-98	192	<0.5	164	85.4%	167	87.0%	133 - 243	2.12	0 - 27.4
Acenaphthylene	ug/L	EPA625	05-28-98	100	<1	72.8	72.8%	69.3	69.3%	36.9 - 99.3	2.47	0 - 17.4
Acenaphthene	ug/L	EPA625	05-28-98	100	<1	62.9	62.9%	59.0	59.0%	41.4 - 87.2	2.76	0 - 10.7
Anthracene	ug/L	EPA625	05-28-98	100	<1	80.6	80.6%	77.5	77.5%	44.6 - 96.0	2.19	0 - 14.1
Benzo(a)anthracene	ug/L	EPA625	05-28-98	100	<1	80.4	80.4%	71.4	71.4%	51.1 - 108	6.36	0 - 13.8
Benzo(a)pyrene	ug/L	EPA625	05-28-98	100	<1	92.5	92.5%	85.6	85.6%	44.4 - 122	4.88	0 - 23.3
Benzo(b)fluoranthene	ug/L	EPA625	05-28-98	100	<1	78.9	78.9%	58.5	58.5%	41.7 - 125	14.4	0 - 22.7
Benzo(g,h,i)perylene	ug/L	EPA625	05-28-98	100	<1	91.6	91.6%	80.7	80.7%	35.8 - 122	7.71	0 - 21.9
Benzo(k)fluoranthene	ug/L	EPA625	05-28-98	100	<1	89.4	89.4%	93.0	93.0%	40.2 - 117	2.55	0 - 23.2
Chrysene	ug/L	EPA625	05-28-98	100	<1	94.0	94.0%	90.7	90.7%	50.3 - 104	2.33	0 - 14.5
Dibnz(a,h)anthracene	ug/L	EPA625	05-28-98	100	<1	31.3	31.3%	25.8	25.8%	18.4 - 132	3.89	0 - 30.2
Fluoranthene	ug/L	EPA625	05-28-98	100	<1	85.5	85.5%	79.3	79.3%	45.5 - 107	4.38	0 - 16.8
Fluorene	ug/L	EPA625	05-28-98	100	<1	73.8	73.8%	69.2	69.2%	44.3 - 90.5	3.25	0 - 11.2
Indn(1,2,3-cd)pyrene	ug/L	EPA625	05-28-98	100	<1	93.6	93.6%	81.2	81.2%	33.3 - 139	8.77	0 - 30.2
Naphthalene	ug/L	EPA625	05-28-98	100	<1	70.3	70.3%	63.2	63.2%	30.8 - 96.2	5.02	0 - 20.9
1-Methyl-Naphthalene	ug/L	EPA625	05-28-98	100	<1	77.4	77.4%	69.3	69.3%	38.9 - 94.9	5.73	0 - 14.4
2-Methyl-Naphthalene	ug/L	EPA625	05-28-98	100	<1	62.2	62.2%	55.7	55.7%	34.1 - 98.9	4.60	0 - 17.3
Phenanthrene	ug/L	EPA625	05-28-98	100	<1	63.3	63.3%	60.2	60.2%	43.3 - 92.3	2.19	0 - 11.6
Pyrene	ug/L	EPA625	05-28-98	100	<1	87.5	87.5%	86.6	86.6%	39.8 - 113	0.636	0 - 17.3



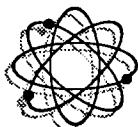
FLOWERS CHEMICAL LABORATORIES, INC.

QA Section 3

Method Blank Report

Client: S&ME-Charlotte
Project Number: UNOCAFE833592778
P.O. Number: 9787-214
Date Sampled: 12-May-98
Lab Numbers: 10859 - 10864

Analyte	Unit	Method	Date	Concentration
1,1,1-trichloroethane	ug/L	EPA601	05-18-98	<1
1,1,2,2-tetrachloroethane	ug/L	EPA601	05-18-98	<1
1,1,2-trichloroethane	ug/L	EPA601	05-18-98	<1
1,1-dichloroethane	ug/L	EPA601	05-18-98	<1
1,1-dichloroethene	ug/L	EPA601	05-18-98	<1
1,2-dichloroethane	ug/L	EPA601	05-18-98	<0.3
1,2-dichloropropane	ug/L	EPA601	05-18-98	<0.25
2-chloroethylvinylether	ug/L	EPA601	05-18-98	<1
Bromodichloromethane	ug/L	EPA601	05-18-98	<1
Bromoform	ug/L	EPA601	05-18-98	<1
cis-1,3-dichloropropene	ug/L	EPA601	05-18-98	<1
Carbon tetrachloride	ug/L	EPA601	05-18-98	<1
Chloroform	ug/L	EPA601	05-18-98	<0.3
Dibromochloromethane	ug/L	EPA601	05-18-98	<1
Methylene chloride	ug/L	EPA601	05-18-98	<1
trans-1,3,-dichloropropene	ug/L	EPA601	05-18-98	<1
Trichlorofluoromethane	ug/L	EPA601	05-18-98	<2
t-1,2-dichloroethene	ug/L	EPA601	05-18-98	<1
Trichloroethene	ug/L	EPA601	05-18-98	<1
Tetrachloroethene	ug/L	EPA601	05-18-98	<1
1,2-dibromo-3-chloropropane	ug/L	EPA601	05-18-98	<1
Bromomethane	ug/L	EPA601	05-18-98	<5
Chlorobenzene	ug/L	EPA601	05-18-98	<0.5
Chloroethane	ug/L	EPA601	05-18-98	<3
Chloromethane	ug/L	EPA601	05-18-98	<5
Dichlorodifluoromethane	ug/L	EPA601	05-18-98	<2
Vinyl chloride	ug/L	EPA601	05-18-98	<0.5
o-dichlorobenzene	ug/L	EPA601	05-18-98	<0.5
m-dichlorobenzene	ug/L	EPA601	05-18-98	<0.5



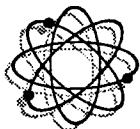
FLOWERS CHEMICAL LABORATORIES, INC.

QA Section 3

Method Blank Report

Client: S&ME-Charlotte
Project Number: UNOCAFE833592778
P.O. Number: 9787-214
Date Sampled: 12-May-98
Lab Numbers: 10859 - 10864

Analyte	Unit	Method	Date	Concentration
Para-dichlorobenzene	ug/L	EPA601	05-18-98	<0.5
o-dichlorobenzene	ug/L	EPA602	05-18-98	<0.5
m-dichlorobenzene	ug/L	EPA602	05-18-98	<0.5
Para-dichlorobenzene	ug/L	EPA602	05-18-98	<0.5
Benzene	ug/L	EPA602	05-18-98	<0.2
Chlorobenzene	ug/L	EPA602	05-18-98	<0.5
Ethylbenzene	ug/L	EPA602	05-18-98	<0.5
Toluene	ug/L	EPA602	05-18-98	<0.5
Xylene	ug/L	EPA602	05-18-98	<0.5
Methyl-tert-butylether	ug/L	EPA602	05-18-98	<0.5
Total_BTEX	ug/L	EPA602	05-18-98	<0.5
Isopropylether	ug/L	EPA602	05-18-98	<1
Acenaphthylene	ug/L	EPA625	05-28-98	<1
Acenaphthene	ug/L	EPA625	05-28-98	<1
Anthracene	ug/L	EPA625	05-28-98	<1
Benzo(a)anthracene	ug/L	EPA625	05-28-98	<1
Benzo(a)pyrene	ug/L	EPA625	05-28-98	<1
Benzo(b)fluoranthene	ug/L	EPA625	05-28-98	<1
Benzo(g,h,i)perylene	ug/L	EPA625	05-28-98	<1
Benzo(k)fluoranthene	ug/L	EPA625	05-28-98	<1
Chrysene	ug/L	EPA625	05-28-98	<1
Dibnz(a,h)anthracene	ug/L	EPA625	05-28-98	<1
Fluoranthene	ug/L	EPA625	05-28-98	<1
Fluorene	ug/L	EPA625	05-28-98	<1
Indn(1,2,3-cd)pyrene	ug/L	EPA625	05-28-98	<1
Naphthalene	ug/L	EPA625	05-28-98	<1
1-Methyl-Naphthalene	ug/L	EPA625	05-28-98	<1
2-Methyl-Naphthalene	ug/L	EPA625	05-28-98	<1
Phenanthrene	ug/L	EPA625	05-28-98	<1



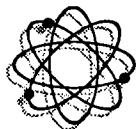
FLOWERS CHEMICAL LABORATORIES, INC.

QA Section 3

Method Blank Report

Client: S&ME-Charlotte
Project Number: UNOCAFE833592778
P.O. Number: 9787-214
Date Sampled: 12-May-98
Lab Numbers: 10859 - 10864

Analyte	Unit	Method	Date	Concentration
Pyrene	ug/L	EPA625	05-28-98	<1



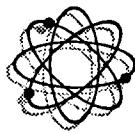
FLOWERS CHEMICAL LABORATORIES, INC.

QA Section 4

QCCS Sample Recovery

Client: S&ME-Charlotte
Project Number: UNOCAFE833592778
P.O. Number: 9787-214
Date Sampled: 12-May-98
Lab Numbers: 10859 - 10864

Analyte	Unit	Method	Date	QCCS Expected	QCCS Measured	Rec. %	Acceptable Limits
1,1,1-trichloroethane	ug/L	EPA601	05-18-98	40.0	33.7	84.3%	29.0 - 48.3
1,1,2,2-tetrachloroethane	ug/L	EPA601	05-18-98	40.0	39.2	98.0%	32.9 - 51.9
1,1,2-trichloroethane	ug/L	EPA601	05-18-98	40.0	38.0	95.0%	31.3 - 52.7
1,1-dichloroethane	ug/L	EPA601	05-18-98	40.0	34.6	86.5%	29.0 - 49.4
1,1-dichloroethene	ug/L	EPA601	05-18-98	40.0	39.3	98.3%	25.4 - 52.8
1,2-dichloroethane	ug/L	EPA601	05-18-98	40.0	35.8	89.5%	29.9 - 49.4
1,2-dichloropropane	ug/L	EPA601	05-18-98	40.0	39.9	99.8%	32.5 - 53.1
Bromodichloromethane	ug/L	EPA601	05-18-98	40.0	34.7	86.8%	30.2 - 49.2
Bromoform	ug/L	EPA601	05-18-98	40.0	43.3	108%	28.2 - 57.4
cis-1,3-dichloropropene	ug/L	EPA601	05-18-98	40.0	34.5	86.3%	31.0 - 49.8
Carbon tetrachloride	ug/L	EPA601	05-18-98	40.0	35.5	88.8%	30.0 - 48.6
Chloroform	ug/L	EPA601	05-18-98	40.0	32.7	81.8%	27.7 - 46.3
Dibromochloromethane	ug/L	EPA601	05-18-98	40.0	39.1	97.8%	31.7 - 53.1
Methylene chloride	ug/L	EPA601	05-18-98	40.0	31.1	77.8%	25.2 - 48.4
trans-1,3,-dichloropropene	ug/L	EPA601	05-18-98	40.0	36.2	90.5%	30.3 - 50.5
Trichlorofluoromethane	ug/L	EPA601	05-18-98	40.0	41.5	104%	26.1 - 56.3
t-1,2-dichloroethene	ug/L	EPA601	05-18-98	40.0	36.0	90.0%	27.0 - 46.0
Trichloroethene	ug/L	EPA601	05-18-98	40.0	36.6	91.5%	28.5 - 50.0
Tetrachloroethene	ug/L	EPA601	05-18-98	40.0	40.5	101%	30.1 - 52.3
1,2-dibromo-3-chloropropane	ug/L	EPA601	05-18-98	40.0	43.6	109%	27.0 - 58.6
Chloroethane	ug/L	EPA601	05-18-98	40.0	43.0	108%	27.0 - 55.4
o-dichlorobenzene	ug/L	EPA601	05-18-98	40.0	38.7	96.8%	33.1 - 50.1
m-dichlorobenzene	ug/L	EPA601	05-18-98	40.0	41.3	103%	30.1 - 53.1
o-dichlorobenzene	ug/L	EPA602	05-18-98	40.0	38.7	96.8%	33.0 - 51.8
m-dichlorobenzene	ug/L	EPA602	05-18-98	40.0	41.3	103%	32.9 - 54.3
Para-dichlorobenzene	ug/L	EPA602	05-18-98	40.0	40.9	102%	32.8 - 55.2
Benzene	ug/L	EPA602	05-18-98	40.0	33.9	84.8%	29.1 - 48.5
Chlorobenzene	ug/L	EPA602	05-18-98	40.0	39.5	98.8%	32.3 - 54.9
Ethylbenzene	ug/L	EPA602	05-18-98	40.0	35.2	88.0%	31.1 - 49.7



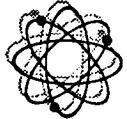
FLOWERS CHEMICAL LABORATORIES, INC.

QA Section 4

QCCS Sample Recovery

Client: S&ME-Charlotte
Project Number: UNOCAFE833592778
P.O. Number: 9787-214
Date Sampled: 12-May-98
Lab Numbers: 10859 - 10864

Analyte	Unit	Method	Date	QCCS Expected	QCCS Measured	Rec. %	Acceptable Limits
Toluene	ug/L	EPA602	05-18-98	40.0	34.3	85.8%	29.9 - 48.1
Xylene	ug/L	EPA602	05-18-98	120	106	88.3%	84.4 - 152
Methyl-tert-butylether	ug/L	EPA602	05-18-98	40.0	31.1	77.8%	23.3 - 45.8
Total_BTEX	ug/L	EPA602	05-18-98	240	209	87.1%	174 - 298
Isopropylether	ug/L	EPA602	05-18-98	40.0	40.0	100%	37.6 - 42.3
Acenaphthylene	ug/L	EPA625	05-28-98	100	71.2	71.2%	38.7 - 96.9
Acenaphthene	ug/L	EPA625	05-28-98	100	61.7	61.7%	41.8 - 85.4
Anthracene	ug/L	EPA625	05-28-98	100	77.4	77.4%	47.7 - 94.9
Benzo(a)anthracene	ug/L	EPA625	05-28-98	100	80.4	80.4%	51.9 - 109
Benzo(a)pyrene	ug/L	EPA625	05-28-98	100	89.1	89.1%	49.5 - 124
Benzo(b)fluoranthene	ug/L	EPA625	05-28-98	100	74.5	74.5%	47.0 - 125
Benzo(g,h,i)perylene	ug/L	EPA625	05-28-98	100	85.0	85.0%	33.7 - 128
Benzo(k)fluoranthene	ug/L	EPA625	05-28-98	100	87.5	87.5%	42.6 - 116
Chrysene	ug/L	EPA625	05-28-98	100	91.3	91.3%	52.8 - 106
Dibnz(a,h)anthracene	ug/L	EPA625	05-28-98	100	28.7	28.7%	23.9 - 134
Fluoranthene	ug/L	EPA625	05-28-98	100	84.7	84.7%	46.9 - 108
Fluorene	ug/L	EPA625	05-28-98	100	70.8	70.8%	45.2 - 89.4
Indn(1,2,3-cd)pyrene	ug/L	EPA625	05-28-98	100	85.7	85.7%	34.1 - 143
Naphthalene	ug/L	EPA625	05-28-98	100	66.1	66.1%	42.4 - 81.2
1-Methyl-Naphthalene	ug/L	EPA625	05-28-98	100	72.7	72.7%	38.5 - 94.7
2-Methyl-Naphthalene	ug/L	EPA625	05-28-98	100	60.1	60.1%	38.2 - 94.2
Phenanthrene	ug/L	EPA625	05-28-98	100	60.7	60.7%	46.2 - 90.2
Pyrene	ug/L	EPA625	05-28-98	100	82.3	82.3%	44.2 - 111



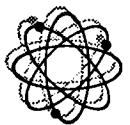
FLOWERS CHEMICAL LABORATORIES, INC.

QA Section 5

Standards Traceability

Client: S&ME-Charlotte
 Project Number: UNOCAFE833592778
 P.O. Number: 9787-214
 Date Sampled: 12-May-98
 Lab Numbers: 10859 - 10864

		Manufacturer	Rec Lot #	Rec By	Date Received	Valid Until	Prep Lot #	Prep By	Date Prepared	Valid Until	t-test	t-test	Control Range	Control Mean	Control Std	Lot Mean	Lot Std
					Standard												
1,1,1-trichloroethane	Accustandard																
1,1,2,2-tetrachloroethane	Accustandard																
1,1,2-trichloroethane	Accustandard	A7040262	687	DO	05-15-97	05-01-98	763	DO	05-15-97	05-01-98	3.06	>1.65	0.979	0.079	1.07	0.014	
1,1-dichloroethane	Accustandard	A7040209	688	DO	05-15-97	05-01-98	780	DO	06-16-97	05-01-98							
1,1-dichloroethylene	Accustandard	A7040262	687	DO	05-15-97	05-01-98	763	DO	05-15-97	05-01-98	3.06	>1.65	0.979	0.079	1.07	0.014	
1,2-dichloroethane	Accustandard	A7040262	687	DO	05-15-97	05-01-98	763	DO	05-15-97	05-01-98							
1,2-dichloropropane	Accustandard	A7040209	688	DO	05-15-97	05-01-98	780	DO	06-16-97	05-01-98							
Bromodichloromethane	Accustandard	A7040262	687	DO	05-15-97	05-01-98	763	DO	05-15-97	05-01-98							
Bromoform	Accustandard	A7040262	687	DO	05-15-97	05-01-98	763	DO	05-15-97	05-01-98	3.69	>1.97	0.992	0.418	1.06	0.039	
Carbon tetrachloride	Accustandard	A7040209	688	DO	05-15-97	05-01-98	780	DO	06-16-97	05-01-98	0.390	>1.97	0.992	0.418	1.06	0.037	
Chloroform	Accustandard	A7040262	687	DO	05-15-97	05-01-98	763	DO	05-15-97	05-01-98	0.369	>1.97	0.992	0.418	1.06	0.039	
cis-1,3-dichloropropene	Accustandard	A7040262	687	DO	05-15-97	05-01-98	763	DO	05-15-97	05-01-98							
Compound	Manufacturer	A7040209	688	DO	05-15-97	05-01-98	780	DO	06-16-97	05-01-98	2.72	>1.65	0.954	0.086	1.05	0.023	
Dibromochloromethane	Accustandard	A7040262	687	DO	05-15-97	05-01-98	763	DO	05-15-97	05-01-98	3.47	>1.65	0.954	0.086	1.02	0.065	
Matrix Spike	Accustandard	A7040262	687	DO	05-15-97	05-01-98	763	DO	05-15-97	05-01-98	2.72	>1.65	0.954	0.086	1.05	0.023	
Matrix Spike	Accustandard	A7040262	687	DO	05-15-97	05-01-98	763	DO	05-15-97	05-01-98	2.47	>1.65	0.942	0.093	1.04	0.103	
Matrix Spike	Accustandard	A7040209	688	DO	05-15-97	05-01-98	780	DO	06-16-97	05-01-98	4.32	>1.65	0.942	0.093	0.921	0.026	
Matrix Spike	Accustandard	A7040262	687	DO	05-15-97	05-01-98	763	DO	05-15-97	05-01-98	2.47	>1.65	0.942	0.093	1.04	0.103	
Matrix Spike	Accustandard	A7040262	687	DO	05-15-97	05-01-98	763	DO	05-15-97	05-01-98	3.27	>1.65	0.978	0.083	1.06	0.022	
Matrix Spike	Accustandard	A7040209	688	DO	05-15-97	05-01-98	780	DO	06-16-97	05-01-98	3.39	>1.65	0.978	0.083	1.05	0.042	
Matrix Spike	Accustandard	A7040262	687	DO	05-15-97	05-01-98	763	DO	05-15-97	05-01-98	3.27	>1.65	0.978	0.083	1.06	0.022	
Matrix Spike	Accustandard	A7040262	687	DO	05-15-97	05-01-98	763	DO	05-15-97	05-01-98							
Matrix Spike	Accustandard	A7040209	688	DO	05-15-97	05-01-98	780	DO	06-16-97	05-01-98	2.24	>1.68	1.02	0.096	1.13	0.062	
Matrix Spike	Accustandard	A7040262	687	DO	05-15-97	05-01-98	763	DO	05-15-97	05-01-98	2.24	>1.68	1.02	0.096	1.08	0.080	
Matrix Spike	Accustandard	A7040262	687	DO	05-15-97	05-01-98	763	DO	05-15-97	05-01-98	2.24	>1.68	1.02	0.096	1.13	0.062	
Matrix Spike	Accustandard	A7040262	687	DO	05-15-97	05-01-98	763	DO	05-15-97	05-01-98	3.39	>1.76	0.973	0.063	1.07	0.023	
Matrix Spike	Accustandard	A7040262	687	DO	05-15-97	05-01-98	763	DO	05-15-97	05-01-98	3.39	>1.76	0.973	0.063	1.07	0.023	
Matrix Spike	Accustandard	A7040209	688	DO	05-15-97	05-01-98	780	DO	06-16-97	05-01-98	3.39	>1.76	0.973	0.063	1.07	0.023	
Matrix Spike	Accustandard	A7040262	687	DO	05-15-97	05-01-98	763	DO	05-15-97	05-01-98	3.39	>1.76	0.973	0.063	1.07	0.023	
Matrix Spike	Accustandard	A7040262	687	DO	05-15-97	05-01-98	763	DO	05-15-97	05-01-98	0.525	>2.04	0.974	0.340	1.06	0.009	
Methylene chloride	Name	A7040209	688	DO	05-15-97	05-01-98	780	DO	06-16-97	05-01-98	0.525	>2.04	0.974	0.340	1.06	0.009	
OCCS	Name	A7040262	687	DO	05-15-97	05-01-98	763	DO	05-15-97	05-01-98	3.29	>1.76	0.995	0.074	1.08	0.021	
OCCS	Accustandard	A7040209	688	DO	05-15-97	05-01-98	780	DO	06-16-97	05-01-98	3.08	>1.76	0.995	0.074	1.07	0.057	



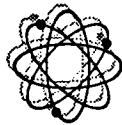
FLOWERS CHEMICAL LABORATORIES, INC.

QA Section 5

Standards Traceability

Client: S&ME-Charlotte
 Project Number: UNOCAFE833592778
 P.O. Number: 9787-214
 Date Sampled: 12-May-98
 Lab Numbers: 10859 - 10864

		Manufacturer	Rec Lot #	Rec By	Date Received	Valid Until	Prep Lot #	Prep By	Date Prepared	Valid Until	t-test	t-test	Control Mean	Control Std	Lot Mean	Lot Std
		Standard				Lot										
1,1,1-trichloroethane		Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	3.29	>1.76	0.995	0.074	1.08	0.021	
OCCS		Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	3.39	>1.76	0.973	0.063	1.07	0.023	
OCCS		Accustandard	A7040262	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	3.39	>1.76	0.973	0.063	1.07	0.023	
OCCS		Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	3.39	>1.76	0.973	0.063	1.07	0.023	
OCCS		Accustandard	A7040262	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	3.39	>1.76	0.973	0.063	1.07	0.023	
OCCS		Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	3.39	>1.76	0.973	0.063	1.07	0.023	
OCCS		Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	3.39	>1.76	0.973	0.063	1.07	0.023	
OCCS		Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	3.39	>1.76	0.973	0.063	1.07	0.023	
OCCS		Accustandard	A7040262	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	4.64	>1.76	1.00	0.061	0.952	0.042	
OCCS		Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	5.34	>1.76	1.00	0.061	0.962	0.018	
OCCS		Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	5.25	>2.04	0.974	0.340	1.06	0.009	
OCCS		Accustandard	A7040262	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	5.25	>2.04	0.974	0.340	1.06	0.009	
OCCS		Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	3.25	>1.76	1.00	0.061	0.962	0.018	
OCCS		Ultra	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	3.25	>1.76	1.00	0.061	0.962	0.018	
Trans-1,3-dichloropropene		Accustandard	K-1145	601	DO 11-26-96	09-09-98	780	DO 06-16-97	05-01-98	3.25	>2.04	0.974	0.340	1.06	0.009	
Trichlorofluoromethane		Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	3.25	>1.68	0.931	0.137	1.03	0.081	
1,1,2-dichlorethane		Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	3.25	>1.68	0.931	0.137	1.03	0.081	
OCCS		Accustandard	A7040262	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	10.2	>1.68	1.01	0.028	1.00	0.052	
Matrix Spike		Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	10.2	>1.68	1.01	0.036	1.00	0.052	
OCCS		Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	10.2	>1.68	1.01	0.036	1.00	0.052	
Trichloroethene		Accustandard	A7040262	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	5.10	>1.76	0.970	0.060	1.03	0.040	
Matrix Spike		Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	5.10	>1.76	0.970	0.060	1.03	0.040	
OCCS		Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	5.10	>1.76	0.970	0.060	1.03	0.040	
Tetrachloroethene		Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	2.07	>1.76	0.949	0.045	1.09	0.050	
OCCS		Accustandard	A7040262	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	3.62	>1.76	0.949	0.045	1.04	0.068	
Matrix Spike		Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	2.07	>1.76	0.949	0.045	1.09	0.050	
1,2-dibromo-3-chloropropane		Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	2.28	>1.65	0.989	0.103	1.08	0.015	
OCCS		Accustandard	A7040262	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	2.09	>1.65	0.989	0.103	1.09	0.032	
Matrix Spike		Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	2.28	>1.65	0.989	0.103	1.08	0.015	
Bromomethane		Ultra	L0147	683	DO 05-15-97	01-01-99	763	DO 05-15-97	05-01-98			0.974	0.035	0.971		
OCCS		Accustandard	L0147	683	DO 05-15-97	01-01-99	763	DO 05-15-97	05-01-98	5.09	>1.68	0.974	0.035	0.971		
Matrix Spike		Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	5.09	>1.68	0.976	0.032	1.04	0.063	
Chlorobenzene		Accustandard	A7040262	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	5.09	>1.68	0.976	0.032	1.04	0.063	
OCCS		Accustandard	A7040262	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	5.09	>1.68	0.976	0.032	1.04	0.063	



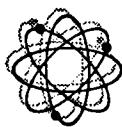
FLOWERS CHEMICAL LABORATORIES, INC.

QA Section 5

Standards Traceability

Client: S&ME-Charlotte
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 Date Sampled: 12-May-98
 Lab Numbers: 10859 - 10864

	Manufacturer	Rec Lot #	Rec By	Date Received	Valid Until	Prep Lot #	Prep By	Date Prepared	Valid Until	t-test	t-test	Control	Control	Lot	Lot	Mean	Std
1,1,1-trichloroethane	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	5.09	>1.68	0.976	0.052	1.04	0.063			
Chloroethane	Ultra	L0147	683	DO 11-26-96	09-09-98	780	DO 06-16-97	05-01-98	1.77	>1.76	0.993	0.074	1.11	0.086			
OCCS	Ultra	K-1145	601	DO 05-15-97	01-01-99	763	DO 05-15-97	05-01-98	1.77	>1.76	0.993	0.074	1.11	0.086			
Matrix Spike	Ultra	L0147	683	DO 05-15-97	01-01-99	763	DO 05-15-97	05-01-98	1.77	>1.76	0.993	0.074	1.11	0.086			
Chloromethane	Ultra	L0147	683	DO 05-15-97	01-01-99	763	DO 05-15-97	05-01-98			0.954	0.079	1.01				
OCCS	Vinyl chloride	L0147	683	DO 05-15-97	01-01-99	763	DO 05-15-97	05-01-98	6.57	>1.68	1.01	0.066	1.01	0.020			
Matrix Spike	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	6.57	>1.68	1.01	0.066	1.01	0.020			
o-dichlorobenzene	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	4.46	>1.75	1.03	0.068	1.08	0.022			
OCCS	Accustandard	A7040262	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	5.03	>1.75	1.03	0.068	1.02	0.068			
Matrix Spike	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	4.46	>1.75	1.03	0.068	1.08	0.022			
m-dichlorobenzene	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	4.77	>1.75	1.00	0.059	1.06	0.024			
OCCS	Accustandard	A7040262	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	4.21	>1.75	1.00	0.059	1.03	0.100			
Matrix Spike	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	4.77	>1.75	1.00	0.059	1.06	0.024			
para-dichlorobenzene	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	2.78	>1.75	1.02	0.092	1.08	0.054			
OCCS	Accustandard	A7040262	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	2.98	>1.75	1.02	0.092	1.06	0.087			
Matrix Spike	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	2.78	>1.75	1.02	0.092	1.08	0.054			
o-dichlorobenzene	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	4.46	>1.75	1.03	0.068	1.08	0.022			
OCCS	Accustandard	A7040262	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	5.03	>1.75	1.03	0.068	1.02	0.068			
Matrix Spike	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	4.46	>1.75	1.03	0.068	1.08	0.022			
m-dichlorobenzene	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	4.77	>1.75	1.03	0.068	1.08	0.022			
OCCS	Accustandard	A7040262	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	4.21	>1.75	1.00	0.059	1.03	0.100			
Matrix Spike	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	4.77	>1.75	1.00	0.059	1.06	0.024			
para-dichlorobenzene	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	4.46	>1.75	1.03	0.068	1.08	0.022			
OCCS	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	4.77	>1.75	1.00	0.059	1.06	0.024			
Matrix Spike	Accustandard	A7040262	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	4.21	>1.75	1.00	0.059	1.06	0.024			
m-dichlorobenzene	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	4.77	>1.75	1.02	0.092	1.08	0.054			
OCCS	Accustandard	A7040262	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	4.21	>1.75	1.02	0.092	1.06	0.087			
Matrix Spike	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	4.77	>1.75	1.02	0.092	1.08	0.054			
Benzene	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	3.39	>1.71	0.951	0.066	1.03	0.072			
OCCS	Accustandard	A7040262	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	1.02	0.059	0.999	0.049					
Matrix Spike	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	3.39	>1.71	0.951	0.066	1.03	0.072			
Chlorobenzene	Accustandard	A7040262	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	5.09	>1.68	0.976	0.052	1.04	0.063			
OCCS	Accustandard	A7040262	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	1.05	0.157	0.947	0.103					



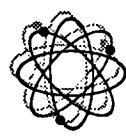
**FLOWERS CHEMICAL
LABORATORIES, INC.**

QA Section 5

Standards Traceability

Client: S&ME-Charlotte
 Project Number: UNOCAFE833592778
 P.O. Number: 9787-214
 Date Sampled: 12-May-98
 Lab Numbers: 10859 - 10864

	Manufacturer	Rec Lot #	Rec By	Date Received	Valid Until	Prep Lot #	Prep By	Date Prepared	Valid Until	t-test	t-test	Control	Control	Lot	Lot	Standard		
																		Lot #
1,1,1-trichloroethane	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	5.09	>1.68	0.976	0.052	1.04	0.063				
Matrix Spike	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	3.39	>1.71	0.951	0.066	1.03	0.072				
Ethylbenzene	Accustandard	A7040269	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	1.02	0.059	0.999	0.049						
OCCS	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	3.39	>1.71	0.951	0.066	1.03	0.072				
Matrix Spike	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	3.39	>1.71	0.951	0.066	1.03	0.072				
Toluene	Accustandard	A7040269	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	1.02	0.059	0.999	0.049						
OCCS	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	3.39	>1.71	0.951	0.066	1.03	0.072				
O-Xylene	Accustandard	A7040262	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	6.64	>1.71	0.965	0.056	0.973	0.056				
OCCS	Accustandard	A7040260	687	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	4.79	>1.68	1.01	0.058	1.07	0.083				
Matrix Spike	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	6.64	>1.71	0.965	0.056	0.973	0.056				
M&P-Xylene	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	7.17	>1.66	0.999	0.060	0.994	0.028				
OCCS	Accustandard	A7040269	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	1.02	0.059	1.04	0.033						
Matrix Spike	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	7.17	>1.66	0.999	0.060	0.994	0.028				
Methyl-tert-butylether	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	3.39	>1.71	0.951	0.066	1.03	0.072				
OCCS	Accustandard	A7040269	688	DO 05-15-97	05-01-98	780	DO 06-16-97	05-01-98	1.02	0.059	0.999	0.049						
Matrix Spike	Accustandard	A7040262	687	DO 05-15-97	05-01-98	763	DO 05-15-97	05-01-98	3.39	>1.71	0.951	0.066	1.03	0.072				
Acenaphthylene	Accustandard	A7040262	687	DO 05-15-97	05-01-98	767	CLS 02-08-97	06-15-97	6.61	>1.67	0.705	0.086	0.701	0.133				
OCCS	Chem Service	191-86A	700	CLS 07-15-97	01-01-99	794	CLS 07-17-97	01-17-98										
Matrix Spike	Chem Service	191-86A	700	CLS 07-15-97	01-01-99	794	CLS 07-17-97	01-17-98										
Acenaphthene	Accustandard	A6110168	610	CLS 12-26-96	03-15-97	667	CLS 02-08-97	06-15-97	7.44	>1.67	0.710	0.078	0.680	0.063				
OCCS	Chem Service	191-86A	700	CLS 07-15-97	01-01-99	794	CLS 07-17-97	01-17-98										
Matrix Spike	Accustandard	A6110168	610	CLS 12-26-96	03-15-97	667	CLS 02-08-97	06-15-97	6.17	>1.67	0.761	0.109	0.750	0.059				
Anthracene	Accustandard	A6110168	610	CLS 07-15-97	01-01-99	794	CLS 07-17-97	01-17-98										
OCCS	Chem Service	191-86A	700	CLS 07-15-97	01-01-99	794	CLS 07-17-97	01-17-98										
Matrix Spike	Chem Service	191-86A	700	CLS 07-15-97	01-01-99	794	CLS 07-17-97	01-17-98										
Benzo(a)anthracene	Accustandard	A6110168	610	CLS 12-26-96	03-15-97	667	CLS 02-08-97	06-15-97	4.69	>1.67	0.780	0.106	0.844	0.033				
OCCS	Chem Service	191-86A	700	CLS 07-15-97	01-01-99	794	CLS 07-17-97	01-17-98										
Matrix Spike	Accustandard	A6110168	610	CLS 12-26-96	03-15-97	667	CLS 02-08-97	06-15-97	2.20	>1.67	0.767	0.151	0.870	0.122				
Benzo(a)pyrene	Accustandard	A6110168	610	CLS 07-15-97	01-01-99	794	CLS 07-17-97	01-17-98	7.63	+1.97	0.767	0.151	0.972	0.165				
OCCS	Chem Service	191-86A	700	CLS 07-15-97	01-01-99	794	CLS 07-17-97	01-17-98	7.63	+1.97	0.767	0.151	0.972	0.165				
Matrix Spike	Accustandard	A6110168	610	CLS 12-26-96	03-15-97	667	CLS 02-08-97	06-15-97	1.97	>1.67	0.781	0.136	0.904	0.082				
Benzo(b)fluoranthene	Accustandard	A6110168	700	CLS 07-15-97	01-01-99	794	CLS 07-17-97	01-17-98										
OCCS	Chem Service	191-86A	700	CLS 07-15-97	01-01-99	794	CLS 07-17-97	01-17-98										



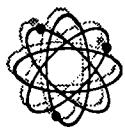
**FLOWERS CHEMICAL
LABORATORIES, INC.**

QA Section 5

Standards Traceability

Client: S&ME-Charlotte
 Project Number: UNOCAFE833592778
 P.O. Number: 9787-214
 Date Sampled: 12-May-98
 Lab Numbers: 10859 - 10864

		Manufacturer	Rec Lot #	Rec By	Date Received	Valid Until	Prep Lot #	Prep By	Date Prepared	Valid Until	t-test	t-test	Control	Control	Lot Mean	Lot Std
					Standard						Range	Mean				
1,1,1-trichloroethane	Accustandard	Chem Service	191-86A	700	CLS 07-15-97	01-01-99	794	CLS 07-17-97	01-17-98							
Matrix Spike	Accustandard	Chem Service	A6110168	610	CLS 12-26-96	03-15-97	667	CLS 02-08-97	06-15-97	2.91	>1.67	0.790	0.144	0.871	0.088	
Benzo(g,h,i)perylene	Accustandard	Chem Service	191-86A	700	CLS 07-15-97	01-01-99	794	CLS 07-17-97	01-17-98							
OCCS	Matrix Spike	Chem Service	191-86A	700	CLS 07-15-97	01-01-99	794	CLS 07-17-97	01-17-98							
Benzo(k)fluoranthene	Accustandard	Chem Service	A6110168	610	CLS 12-26-96	03-15-97	667	CLS 02-08-97	06-15-97	4.51	>1.67	0.818	0.142	0.799	0.079	
OCCS	Matrix Spike	Chem Service	191-86A	700	CLS 07-15-97	01-01-99	794	CLS 07-17-97	01-17-98							
Chrysene	Accustandard	Chem Service	A6110168	610	CLS 12-26-96	03-15-97	667	CLS 02-08-97	06-15-97	6.17	>1.67	0.798	0.111	0.790	0.053	
OCCS	Matrix Spike	Chem Service	191-86A	700	CLS 07-15-97	01-01-99	794	CLS 07-17-97	01-17-98							
DBnz(a,h)anthracene	Chem Service	Chem Service	191-86A	191-86A	700	CLS 07-15-97	01-01-99	794	CLS 07-17-97	01-17-98						
OCCS	Matrix Spike	Chem Service	191-86A	700	CLS 07-15-97	01-01-99	794	CLS 07-17-97	01-17-98							
Fluoranthene	Accustandard	Chem Service	A6110168	610	CLS 12-26-96	03-15-97	667	CLS 02-08-97	06-15-97	5.45	>1.67	0.800	0.110	0.772	0.073	
OCCS	Matrix Spike	Chem Service	191-86A	700	CLS 07-15-97	01-01-99	794	CLS 07-17-97	01-17-98							
Fluorene	Accustandard	Chem Service	A6110168	610	CLS 12-26-96	03-15-97	667	CLS 02-08-97	06-15-97	7.93	>1.67	0.714	0.080	0.690	0.031	
OCCS	Matrix Spike	Chem Service	191-86A	700	CLS 07-15-97	01-01-99	794	CLS 07-17-97	01-17-98							
Indn(1,2,3-cd)pyrene	Chem Service	Chem Service	191-86A	700	CLS 07-15-97	01-01-99	794	CLS 07-17-97	01-17-98	8.14	± 1.97	0.770	0.132	1.02	0.201	
OCCS	Matrix Spike	Chem Service	191-86A	700	CLS 07-15-97	01-01-99	794	CLS 07-17-97	01-17-98	8.14	± 1.97	0.770	0.132	1.02	0.201	
Naphthalene	Accustandard	Chem Service	A6110168	610	CLS 12-26-96	03-15-97	667	CLS 02-08-97	06-15-97	6.15	>1.67	0.681	0.091	0.635	0.029	
OCCS	Matrix Spike	Chem Service	191-86A	700	CLS 07-15-97	01-01-99	794	CLS 07-17-97	01-17-98							
1-Methyl-Naphthalene	Chem Service	Chem Service	41-41A	160	CLS 06-06-94	06-06-97	667	CLS 02-08-97	06-15-97	3.19	>1.67	0.712	0.090	0.650	0.099	
OCCS	Matrix Spike	Chem Service	41-41A	160	CLS 06-06-94	06-06-97	794	CLS 07-17-97	01-17-98							
2-Methyl-Naphthalene	Chem Service	Chem Service	62-6A	161	CLS 06-06-94	06-06-97	667	CLS 02-08-97	06-15-97	2.29	>1.67	0.662	0.075	0.771	0.148	
OCCS	Matrix Spike	Chem Service	62-6A	161	CLS 06-06-94	06-06-97	794	CLS 07-17-97	01-17-98							
Phenanthrene	Chem Service	Chem Service	191-86A	700	CLS 07-15-97	01-01-99	794	CLS 07-17-97	01-17-98							
OCCS																



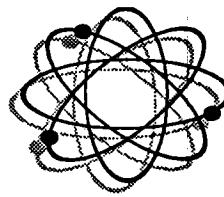
FLOWERS CHEMICAL LABORATORIES, INC.

QA Section 5

Standards Traceability

Client: S&ME-Charlotte
 Project Number: UNOCAFE833592778
 P.O. Number: 9787-214
 Date Sampled: 12-May-98
 Lab Numbers: 10859 - 10864

		Manufacturer Lot #	Rec Lot #	Rec By	Date Received	Valid Until	Prep Lot #	Prep By	Date Prepared	Valid Until	t-test t-test	t-test range	Control Mean	Control Std	Lot Mean	Lot Std	
			Standard														
1,1,1-trichloroethane Matrix Spike	Accusstandard Chem Service	191-86A	700	CLS	07-15-97	01-01-99	794	CLS	07-17-97	01-17-98							
Pyrene OCCS Matrix Spike	Chem Service Chem Service	191-86A	700	CLS	07-15-97	01-01-99	794	CLS	07-17-97	01-17-98							
EPA601 Blank	Flowers Chemical Laboratory	Valid	34	JSF	01-01-95	01-01-97	660	DO	02-01-97	01-01-98							
EPA602 Blank	Flowers Chemical Laboratory	Valid	34	JSF	01-01-95	01-01-97	660	DO	02-01-97	01-01-98							
EPA625 Blank	EMS	Valid	359	FG	12-08-95	12-08-96	380	FG	12-08-95	12-08-96							
EPA625 Blank	Flowers Chemical Laboratory	Valid	34	JSF	01-01-95	01-01-97	14	JSF	01-01-95	01-01-97							
EPA625 Blank	EMS	Valid	359	FG	12-08-95	12-08-96	380	FG	12-08-95	12-08-96							
EPA625 Blank	Flowers Chemical Laboratory	Valid	34	JSF	01-01-95	01-01-97	14	JSF	01-01-95	01-01-97							
EPA625 Blank	EMS	Valid	359	FG	12-08-95	12-08-96	380	FG	12-08-95	12-08-96							
EPA625 Blank	Flowers Chemical Laboratory	Valid	34	JSF	01-01-95	01-01-97	14	JSF	01-01-95	01-01-97							
EPA625 Blank	EMS	Valid	359	FG	12-08-95	12-08-96	380	FG	12-08-95	12-08-96							
EPA625 Blank	Flowers Chemical Laboratory	Valid	34	JSF	01-01-95	01-01-97	14	JSF	01-01-95	01-01-97							
EPA625 Blank	EMS	Valid	359	FG	12-08-95	12-08-96	380	FG	12-08-95	12-08-96							
EPA625 Blank	Flowers Chemical Laboratory	Valid	34	JSF	01-01-95	01-01-97	14	JSF	01-01-95	01-01-97							
EPA625 Blank	EMS	Valid	359	FG	12-08-95	12-08-96	380	FG	12-08-95	12-08-96							
EPA625 Blank	Flowers Chemical Laboratory	Valid	34	JSF	01-01-95	01-01-97	14	JSF	01-01-95	01-01-97							
EPA625 Blank	EMS	Valid	359	FG	12-08-95	12-08-96	380	FG	12-08-95	12-08-96							
EPA625 Blank	Flowers Chemical Laboratory	Valid	34	JSF	01-01-95	01-01-97	14	JSF	01-01-95	01-01-97							
EPA625 Blank	EMS	Valid	359	FG	12-08-95	12-08-96	380	FG	12-08-95	12-08-96							
EPA625 Blank	Flowers Chemical Laboratory	Valid	34	JSF	01-01-95	01-01-97	14	JSF	01-01-95	01-01-97							
EPA625 Blank	EMS	Valid	359	FG	12-08-95	12-08-96	380	FG	12-08-95	12-08-96							
EPA625 Blank	Flowers Chemical Laboratory	Valid	34	JSF	01-01-95	01-01-97	14	JSF	01-01-95	01-01-97							
EPA625 Blank	EMS	Valid	359	FG	12-08-95	12-08-96	380	FG	12-08-95	12-08-96							
PAH Extraction Blank	Flowers Chemical Laboratory	Valid	34	JSF	01-01-95	01-01-97	14	JSF	01-01-95	01-01-97							
Hall Spike	Aldrich	01920EY	539	DO	01-01-95	01-01-99	549	CST	07-18-96	07-18-97	3.31	#2.00	0.589	0.154	0.794	0.259	
PID Spike	Aldrich	11231EN	538	DO	01-01-95	01-01-99	549	CST	07-18-96	07-18-97	8.69	>1.69	1.02	0.031	1.01	0.098	
Surr Spike(2FBP)	Aldrich	02520TK	195	CLS	04-03-95	04-03-99	792	CLS	07-16-97	07-16-98	2.90	1.99	0.682	0.152	0.599	0.166	
Sur_Spike(DBBP)	Chem Service	129-140B	197	CLS	06-11-95	07-30-99	792	CLS	07-16-97	07-16-98							



FLOWERS CHEMICAL LABORATORIES

Internal Custody Record Lab Numbers: 10859 - 10864

Lab # 10859

Container 167962 Amber 1 L:

Extraction CE Karen Turgeon Fri, 05/15/98 01:24PM

Lab # 10860

Container 166971 Amber 1 L:

Shpped to customer Check-in Station Mon, 05/04/98 02:58PM

Extraction CE Karen Turgeon Fri, 05/15/98 01:24PM

Lab # 10861

Container 166969 Amber 1 L:

Shpped to customer Check-in Station Mon, 05/04/98 02:58PM

Extraction CE Karen Turgeon Fri, 05/15/98 01:24PM

Lab # 10862

Container 166964 Amber 1 L:

Shpped to customer Check-in Station Mon, 05/04/98 02:58PM

Lab # 10863

Container 166965 Amber 1 L:

Shpped to customer Check-in Station Mon, 05/04/98 02:58PM

Extraction CE Karen Turgeon Fri, 05/15/98 01:24PM

Lab # 10864

Container 166967 Amber 1 L:

Shpped to customer Check-in Station Mon, 05/04/98 02:58PM

Extraction CE Karen Turgeon Fri, 05/15/98 01:24PM

Jefferson L. Flowers, Ph.D
Jefferson S. Flowers, Ph.D
P O BOX 150597
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ALTAMONTE SPRINGS
FLORIDA 32715 - 0597
BUS: (407) 339-5984
FAX: (407) 260-6110
Section 5 of 5



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P.O. BOX 150-597
ALTAMONTE SPRINGS
FLORIDA 32715-0597
BUS. (407) 339-5984
FAX: (407) 260-6110
CHEMICAL
LABORATORIES
INCORPORATED

UNOCAL '76 FOR CUSTODY RECORD

Company Name: **54ME** Project Name: **UNOCAL 9787 - Z14**

Address: **9751 S. Park Blvd** UNOCAL Project Manager:

City: **Charlotte** State: **NC** Zip Code: **28273** AFE #: **352927785**

Telephone: **704-523-4724** FAX #: **704-525-5953** Site #: **MORANE**

Report To: **Stainless Lines** Sampler: **Casey Simcox** QC Data: Level D (Standard) Level C Level B Level A

Turnaround 10 Work Days 5 Work Days 3 Work Days Drinking Water
 Time: 2 Work Days 1 Work Day 2-8 Hours Waste Water

CODE: Misc. Detect. Eval. Remed. Demol. Closure

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	PRESERVATIVES		ANALYSES REQUEST
						NO. OF CONTAINERS	UNPRESERVED	
MW-7	5/12 1:30	W	4		10859	1	HCl	61,62,202,401,601,604,605,610,619,620,621,622,623,624,625,626
MW-8	5/12 2:00	W	4		60	1	H ₂ SO ₄	
MW-4	5/12 2:30	W	4		61	1	H ₂ SO ₄	
MW-3	5/12 3:00	W	4		62	1		
Williams	5/12 4:00	W	4		63	1		
DMS-5	5/12 3:30	W	4		10864	1		

Relinquished By: <u>Jay Lewis</u>	Date: 5/13/98	Time: 9:00	Received By:	Date: _____	Time: _____
Relinquished By: _____	Date: _____	Time: _____	Received By: _____	Date: _____	Time: _____
Relinquished By: _____	Date: _____	Time: _____	Received By Lab: _____	Date: 5/13/98	Time: 10:09
Approved by: _____			Method of Shipment	Page 1 of 1	

To be completed upon receipt of report:

- 1) Were the analyses requested on the Chain of Custody reported? Yes No If no, what analyses are still needed? _____
 2) Was the report issued within the requested turnaround time? Yes No If no, what was the turnaround time? _____
 Company: _____

PM: Ron Novy

Flowers Chemical Laboratories, Inc.

Cooler Receipt, Custody Record Verification, Preservation Form

Client: S&ME-Charlotte

FCL Lab #: 10859 - 10864

Project: UNOCAFE833592778

Cooler Rec'd on 05-15-98

Cooler opened on: 05-15-98

Rec'd b SJW

Log-in date: 05-15-98

	Yes	No	NA
a. Airbills or airbill stickers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Traffic reports or packing lists	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Custody seals on shipping containers	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Custody seals intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Custody seal numbers if yes, _____	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Airbill or airbill sticker Shipped via: <u>Airborne Exp Airbill #:</u> <u>6966395236</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Cooler Temperature upon receipt <u><4</u> Degrees C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. If sample vials received, were bubbles observed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i. Client/FCL chain-of-custody forms present	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Was condition of shipping containers OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Sample tags present	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Were sample containers in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m. Were all containers labeled correctly	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n. Did all labels agree with Chain of Custody record	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o. Were correct containers sent for requested analysis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
p. Were samples properly preserved (see below)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
q. Project Manager notified as to discrepancies	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Explanation of Discrepancies/Remarks: _____

Preservation Check		Yes	No	Comments: _____
pH	Reagent			
>12	NaOH	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
<2	HNO3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
<2	H2SO4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
<2	HCL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
	Na2S2O3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____

PRE-APPROVAL TASK AUTHORIZATION FORM

Department of Environment, Health & Natural Resources
Division of Water Quality

Site Name	Unocal - Mebane, NC #9787-214	Site Rank	High	Incident#	10119	
City	Mebane, NC	County	Alamance			
Owner/Operator/Landowner/Attorney-in-fact Unocal Corporation						
Name of Consulting Firm	S&ME, Inc.					
Name of Project Manager (consultant)	Stewart Hines					
Date of Proposal (consultant)	6/4/98	Proposal Number (consultant)	1354-7023-98a			
Consultant Phone	(704) 523-4726	Consultant Fax	(704) 525-3953			
Regional Office	Winston Salem, NC	Incident Manager	Waddell Watters			
Site Status	X Commercial	X Non-Commercial				
Has State Trust Fund eligibility been determined? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
TASK AUTHORIZATION NUMBER (assigned by region)						
TOTAL AMOUNT NOT TO EXCEED (this task authorization) <u>\$3,555.00</u>						

Note to reimbursement claimants: Proposals are required to elaborate on the costs for the tasks listed below and describe the scope of work and the rationale for conducting these activities. Pre-approval from the appropriate regional office for tasks that could not have been reasonably anticipated or for tasks that were inadvertently omitted in the original task authorization, also requires a **CHANGE ORDER FORM** to be submitted and approved by the appropriate regional office. Written justification(s) must be provided to the regional office before a change order can be granted. When all authorized work is completed and the claim is to be compiled, it is **required** that a copy of the approved and signed (by the region) **TASK AUTHORIZATION FORM** and any previously approved **CHANGE ORDER FORM** with written justification be incorporated into the claim. Claims will not be processed without these documents. Final reimbursement of costs associated with the above authorized amount may vary depending on eligibility status of the site (i.e., deductibles, apportionment, etc.). Costs associated with developing and submitting a proposal, the task authorization or change order form are not reimbursable.

Task Number	Requested Amt. (Consultant)	Approved Amt. (Regional Office)	Task Number	Requested Amt. (Consultant)	Approved Amt. (Regional Office)
4.000	\$90.00				
4.031	\$500.00				
4.041	\$40.00				
4.090	\$2,000.00				
6.000	\$25.00				
6.100	\$900.00				

INCIDENT MANAGER AUTHORIZATION _____ DATE _____

GROUNDWATER SUPERVISOR AUTHORIZATION _____ DATE _____

DEADLINE FOR TASK COMPLETION _____